U. S. TREASURY DEPARTMENT
ANDREW W. MELLON, *Secretary*
PUBLIC HEALTH SERVICE
HUGH S. CUMMING, *Surgeon General*

Proceedings of the Conference of Representatives of Medical, Dental, Pharmaceutical, and Veterinary Associations and Other Scientific Associations and Agencies with the Surgeon General of the United States Public Health Service

Held at Washington, D. C.
August 12, 1930

PREPARED BY DIRECTION
OF THE SURGEON GENERAL

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UNITED STATES PUBLIC HEALTH SERVICE

HUGH S. CUMMING, *Surgeon General*

DIVISION OF SANITARY REPORTS AND STATISTICS

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They contain (1) Current information of the prevalence and geographic distribution of preventable diseases in the United States in so far as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other communicable diseases throughout the world. (2) Articles relating to the cause, prevention, or control of disease. (3) Other pertinent information regarding sanitation and the conservation of the public health.

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CONTENTS

CONTENTS

INTRODUCTION

The proceedings of a conference held in Washington, D. C., on August 12, 1930, are published as a matter of convenience for ready reference, and for those who are interested in the evolution of the methods adopted by the United States Public Health Service in arriving at the quantities of crude opium and coca leaves necessary for medicinal and scientific uses in the United States.

The results of the conference are published in two parts; the first part is a synopsis or summary of the proceedings, and the second part is a detailed or verbatim report of the minutes of the meeting.

The function of determining the medicinal and scientific needs of the United States respecting these drugs is one of several duties imposed upon the Public Health Service by the Seventy-first Congress, and its administration is being carried on through the division of mental hygiene in the office of the Surgeon General.

Acknowledgment is due, and is hereby made, to the drug committee of the National Research Council for furnishing funds necessary for the verbatim transcript of the proceedings without cost to the United States Government.

LIST OF SPEAKERS

CONFERENCE OF REPRESENTATIVES OF MEDICAL, DENTAL, PHARMACEUTICAL, AND VETERINARY ASSOCIATIONS AND OTHER SCIENTIFIC ASSOCIATIONS AND AGENCIES WITH THE SURGEON GENERAL OF THE UNITED STATES PUBLIC HEALTH SERVICE

Held at Washington, D. C., Tuesday, August 12, 1930

SUMMARY OF THE PROCEEDINGS[1]

A conference of representatives of medical, dental, pharmaceutical, veterinary and other scientific associations and agencies with the Surgeon General of the United States Public Health Service was held in Washington, D. C., August 12, 1930, for the purpose of considering the question of (*a*) the necessity for and (*b*) the methods to be used in making studies and investigations for carrying out the provisions of the act approved June 14, 1930, relating to the quantities of crude opium, coca leaves, and their salts, derivatives and preparations, together with such reserves thereof as are necessary to supply the normal and emergency medicinal and scientific requirements of the United States. The proceedings of that conference are herein briefly reviewed and summarized.

The national organizations represented included the following:

American Dental Association.
American Drug Manufacturers Association.
American Hospital Association.
American Institute of Homeopathy.
American Medical Association.
American Medical Editors' and Authors' Association.
American Pharmaceutical Association.
American Veterinary Medical Association.
Bureau of Social Hygiene (Inc.).
Committee on Drug Addictions.
National Medical Association.
National Research Council.
The Chemical Foundation (Inc.).
The National Association of Retail Druggists.
Bureau of Narcotics.
Department of Agriculture, Food, Drug, and Insecticide Administration.
Department of the Interior, Office of Indian Affairs.
Department of the Navy.
State Department.
United States Veterans' Bureau.
War Department.

[1] This summary was published in the Public Health Reports for Oct. 3, 1930.

The conference was opened at 10 a. m., recessed at 12.40 p. m., reconvened at 2.15 p. m., and adjourned at 4.05 p. m., deliberating a total of 4 hours and 30 minutes, under the chairmanship of Surg. Gen. Hugh S. Cumming.

At the opening of the conference it was explained that the Public Health Service assumed no regulatory functions respecting imports of crude opium or coca leaves, but was acting wholly in the capacity of scientific advisor to the Bureau of Narcotics with reference to the quantities of these drugs needed in the United States for medicinal and scientific purposes. It was also pointed out that the Surgeon General must decide whether or not it is necessary for the Public Health Service to undertake special studies and investigations to determine these needs, and the kind of program to be inaugurated, should special studies and investigations become necessary.

The methods of controlling imports, manufacture, sale, and distribution of narcotic drugs by the Federal Government were reviewed by Mr. Alfred Tennyson, legal advisor of the Bureau of Narcotics, who called attention to the regulation of imports of crude opium and coca leaves by a system of import certificates or permits, and to the regulation of the sale and distribution of narcotic drugs by a system of official order forms used by registrants with the collector of internal revenue. Briefly, the scheme of control involves, first, the importer, the manufacturer, and the compounder, who must report each month to the central authority the quantity of all imports of crude opium and coca leaves, the quantity placed in process of manufacture, the quantity of drugs actually produced, the taxable goods sold, and the quantities furnished each customer; second, the wholesale dealer who sells in original, unbroken, stamped packages, and who submits to the central authority a monthly report of all transactions in narcotic drugs, giving information regarding the quantities received and sold, and to whom consigned. These dealers are called, for purposes of convenience, the producing and wholesale group, comprising class 1 and class 2 registrants under the narcotic laws.

The retailing and dispensing group must obtain their supply of narcotic drugs through the use of official order forms, must be registered with the collector of internal revenue, and must make an annual report of drugs on hand to the central authority. They are not, however, required to submit a monthly return of the disposition of these drugs, such as is required of class 1 and class 2 registrants. For purposes of convenience, the dispensing group comprises retail druggists or pharmacists, designated as class 3; the practitioners, embracing physicians, veterinary surgeons, and dentists, are grouped as class 4; and those who dispense the so-called exempt preparations containing opium or coca leaves or their derivatives are grouped as

class 5. During the course of discussion attention was called to the use of a considerable quantity of opium or its derivatives in exempt preparations and that the quantities of opium so used had increased within recent years.

Mr. S. H. Breidenbach, statistician of the Bureau of Narcotics, opened the discussion on the subject of a statistical analysis of sales and distribution of narcotic drugs in the United States with special reference to medicinal requirements. He pointed out that the monthly reports rendered by the manufacturer of these drugs is very detailed and readily available for statistical study. Reports rendered by wholesale dealers are unsatisfactory for statistical analysis, because the kind of narcotic drug contained in preparations sold or purchased is not always stated, and, if stated, is not computed as to narcotic content, nor is the classification of data readily available for statistical analysis.

No reports are submitted to the Bureau of Narcotics respecting the disposition of narcotic drugs by the dispensing groups, embracing the pharmacist, practitioner, and dealer in exempt preparations. There are available, however, data showing the quantities of such drugs purchased by the dispensing group as a whole, but it is not classified in a way that would show the quantities purchased by pharmacists, by physicians or medical practitioners, by veterinarians, by dentists, or by those who deal in exempt preparations.

From the discussions which ensued it appears that data on file in the Bureau of Narcotics are subject to further analysis and study with reference to the more specific requirements of the dispensing groups, but lack of personnel has made these studies impossible. The method of submitting annual invoices of drugs on hand by the dispensing groups does not lend itself to statistical analysis, however. An analysis of the manufacturers' reports has indicated an increasing amount of opium or its derivatives finding its way into exempt preparations and a greater proportionate increase in the use of codeine or codeine salts. It is very probable that a larger quantity of opium than that formerly used in the manufacture of heroin has found its way into the manufacture of codeine.

Dr. E. F. Kelly, speaking for the American Pharmaceutical Association, opened the discussion on the specific question of "How important is the theoretical diversion of drugs from legitimate channels, and what rôle can a scientific study of dispensing methods play in determining the extent of such diversions?" An opinion was expressed by that association to the effect that a more nearly complete study and analysis of the information available to those charged with the enforcement of the narcotic law would furnish data respecting diversions of narcotic drugs from legitimate channels, and that such a method of study would be more advantageous than to attempt

a first-hand analysis of dispensing methods. Studies and investigations of infractions of the narcotic laws, and an analysis of diversions of drugs incident thereto, should be supplemental to the analysis of manufacturers' sales already referred to. Attention was called to the necessity for more detailed studies of the enforcement of one phase of the Federal narcotic laws dealing with the subject of exempt preparations with a view to developing greater supervision over the sale and distribution of such preparations.

The subject of exempt preparations was more fully discussed by Dr. R. L. Swain, representing the same association, who pointed out the need for stricter control, and the desirability of eliminating certain preparations and derivatives of opium from the exempt class so as to reduce the likelihood of their being used to satisfy addiction.

In a discussion of the specific question, "Is the present system of analyzing manufacturers' and wholesalers' sales adequate to establish a reasonable estimate of the medicinal and scientific needs of the United States respecting narcotic drugs?" Mr. Carson P. Frailey, executive vice president and secretary of the American Drug Manufacturers Association, requested the legal adviser of the Bureau of Narcotics to make suggestions as to how the present system of determining imports had functioned, and ventured the opinion that previous estimates, based upon an analysis of manufacturers' sales, have been reasonably accurate for the needs of the country without taking into account the necessity of reserves to meet emergencies.

Mr. Alfred Tennyson, in response to this question, considered that an analysis of manufacturers' sales and stocks on hand was a good criterion for determining the medical and legitimate needs if one could assume a 100 per cent efficiency in enforcement of the narcotic laws. This, he pointed out, was all the more significant when consideration was given to the fact that all transfers of narcotic products down to the consuming classes must take place through official order forms, and that such forms can be obtained only by registrants presumably qualified to deal in narcotic products. Attention was called to the diversion of these drugs from legitimate channels to satisfy addiction.

The total amount of such diversion would be possible, but very difficult, to ascertain; but, even if known, it would be of questionable value in determining the amount necessary for importation because, should imports be reduced by an amount equal to the actual, or even theoretical, diversion, then imports would not meet the country's requirements, since diverting practices would still continue. On the other hand, should no diversion exist, or presuming that the narcotic law enforcement was sufficient to prevent all diversions, then the analysis of manufacturers' sales and stocks could be taken as a reliable criterion of the medicinal requirements.

Further discussion brought to light that an analysis of the monthly returns of purchases of narcotic drugs by the dispensing groups readily indicated which was being used in large or exorbitant quantities. These are subject to scrutiny and investigation to ascertain whether their use is questionable or illegal. The small force available to those charged with administering the narcotic laws makes it impossible to discover all irregular practices of this sort.

Subsequent discussions challenged the assumption that any considerable quantity of narcotic drugs was diverted from legitimate channels by the dispensing classes, and that such diversion was practically nil, if any, from the manufacturing, compounding, and wholesale groups.

Mr. J. K. Caldwell, of the State Department, who has had five years' experience as a member of the Federal Narcotics Control Board, commented upon the interpretation of "medical and scientific needs." Thus, if medical and scientific needs respecting narcotic drugs are to be interpreted as heretofore, manufacturers' sales are an adequate criterion for these needs. On the other hand, should these needs be interpreted as only the amounts used in good faith in the bona fide practice of the several professions using them, the quantity of such drugs diverted from legal channels should be subtracted from manufacturers' sales to arrive at an estimate of the country's needs.

In dealing with the specific inquiry as to the necessity for making studies and investigations respecting the quantities of narcotic drugs needed for medicinal and scientific purposes in the United States, the trend of discussion hinged upon an analysis of information now available to those charged with administering the narcotic laws, and that data on file in the Bureau of Narcotics was either subject to further study and investigation or could be collected and supplemented through that channel with less difficulty than by an independent survey undertaken directly by the United States Public Health Service.

Taking into account the present organization for law enforcement and the possibility of preventing diversions of narcotic drugs from legitimate channels with the machinery at hand, it was the tenor of the conference that the present system of analyzing manufacturers' sales offered, for the time being, a reasonable solution for determining the medicinal and scientific needs respecting narcotic drugs for the United States. With full appreciation of these results, the conference continued to discuss further items on the agenda.

The principles involved in previous studies and investigations respecting medicinal needs were discussed by a representative of the State Department, the United States Public Health Service, and the committee on drug addictions. Mr. J. K. Caldwell, representing the

State Department, called attention to the interest of other governments in studies of this character, and stated that the problem of controlling the abuse of narcotic drugs was not only a domestic one but an international one as well. It was pointed out that The Hague Convention required governments to limit the amount of manufacture of narcotic drugs to medicinal and legitimate purposes. Up to the present, no government has undertaken a special study of these needs that would provide complete and adequate data, although an effort was made by the League of Nations to ascertain these needs by questionnaire sent to the various powers. Each government answered in its own way, or not at all. In some instances the results obtained were largely based upon hospital uses and health insurance data; and in others on the formula of importation plus manufacture, minus exports, taking no account of diversions. As a result, inadequate information was available for the League of Nations conference of 1924.

The conference recently called by the League of Nations is faced with the problem of limiting the manufacture of narcotic drugs to medicinal and legitimate needs. Thus far the formula for the United States is "manufacture less exports."

Dr. G. W. McCoy, director of the National Institute of Health, discussed the survey undertaken by the Public Health Service in Allegany County, Md., in 1924, to ascertain the narcotic requirements of a restricted area in order to obtain a reliable basis for computing the requirements of the country as a whole. The method of approach involved a personal canvass of every registrant legally authorized to deal in narcotic drugs, with the result that approximately 7 grains of opium and 29 grains of cocaine were the annual per capita requirements. These were the requirements of approximately 70,000 people, without any account being taken of the amount necessary to meet emergencies. These results included the so-called exempt preparations, which constituted about 4 per cent of the requirements of opium.

Dr. C. E. Terry, of New York, discussed the surveys undertaken under the auspices of the committee on drug addictions, of which he is executive secretary. Like the Public Health Service survey, the surveys of the committee on drug addictions were concerned with a detailed study of the legal narcotic uses, the technique employed being an analysis of the "record-keeping machinery," registrants' records required by the Federal narcotic laws.

The first surveys were undertaken in six communities of approximately 100,000 population each, widely scattered, and therefore embraced about 600,000 population. The per capita legal uses of narcotic drugs expressed in opium equivalence, varied considerably for these six communities, ranging from 3.5 to 17 grains of opium. In

three the annual per capita legal use was 5, 6, and 7 grains of opium, respectively. In one it was between 13 and 14 grains. Because of the wide variations in per capita uses, an attempt was made to analyze further the data respecting these six communities. A more comprehensive analysis of "registrants' records" was undertaken in a large urban-suburban community with a population of approximately 1,625,000. The per capita legal use is represented by approximately 9 grains of opium. Data were also obtained by questionnaire of the legal use of these drugs in hospitals and institutions throughout the United States during the 12 months' period ending June 30, 1924. From these data there was obtained an average annual narcotic-drug requirement per hospital bed.

The communities surveyed by the committee on drug addictions represented approximately a total population of 2,200,000 persons, or about 2 per cent of the total population of the United States. Taking into account the results of an analysis of "registrants' records," as provided under the Federal narcotic law and the hospital uses, the per capita requirement represents approximately 8½ grains (8.56 grains) of opium per annum. This requirement does not take into account any quantities necessary to meet emergencies.

In the discussion which ensued, it was pointed out that the records of retail sales of exempt preparations were not satisfactory for analysis and it was necessary to return to the wholesale or manufacturers' sales figures for reliable data concerning these preparations. It was also shown that the importation of approximately 150,000 pounds of opium during the years 1926 and 1927 was almost parallel with the estimated requirements of approximately 8½ grains per capita.

Col. John D. McLean, of the American Hospital Association, opened the discussion upon the subject of the advisability of analyzing the records of general and special hospitals or institutions with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels of narcotic drugs as a basis for determining the normal medicinal and scientific requirements, and what official and unofficial agencies may be expected to furnish this information. As a preliminary to the discussion of this particular subject, Colonel McLean had undertaken a brief and cursory survey of the Philadelphia General Hospital at Philadelphia, Pa., which treats approximately 20,000 patients each year. This cursory survey showed that during the year 1927 the per capita patient requirement was 1.85 grains of morphine; in 1928, 1.5; and in 1929, 1.3. There has been a great increase in the amount of codeine used in the past several years. In 1929 each patient of the 20,000 treated averaged 7.5 grains of codeine. In 1928 the per capita was 6 grains of codeine. The survey with respect to the quantities of cocaine used indicated a per capita monthly requirement of 1 grain of cocaine.

Colonel McLean also analyzed a small tuberculosis hospital treating 793 patients during the year 1929. The per capita requirement was one-eightieth of a grain of morphine each day, and each patient received one-tenth of a grain of codeine each day. Diversions to illegitimate channels in these two hospitals is practically negligible, and attention was called to the necessity of preventing diversions in hospital practice. In further discussion Colonel McLean pointed out that a proper supervision of records available to those engaged in administering both Federal and State narcotic laws should give information complete enough to arrive at a definite conclusion as to the amounts of narcotic drugs that are required in this country. An analysis of the quantities of narcotic drugs legally used in a representative group of hospitals might serve as a basis for computing the annual requirements concerning the medicinal needs, however. Studies and investigations as to the uses of these drugs and the needs of the practicing physician probably constitute a very difficult problem. They might be made, however, by studies of the records of prescriptions issued and the quantities of narcotic drugs dispensed by groups of physicians attached to the hospitals surveyed.

Dr. A. C. Boylston, of the American Drug Manufacturers Association, brought up the question as to whether such studies and investigations were to be perpetual in character, and pointed out that ideas of physicians respecting the prescribing of narcotic drugs were constantly changing and called attention to the decrease in the quantity of morphine sold and a corresponding increase in the quantity of codeine sold. The increasing tendency to use codeine in lieu of morphine would affect materially the quantity of crude opium importations, because it requires approximately six times as much opium to provide a dose of codeine as it does to provide a dose of morphine.

There then ensued some discussion as to the addiction properties of codeine, and it was the sense of the conference that codeine in itself had either questionable or practically no addiction properties, and that probably it would be desirable to place as few restrictions as possible about its use. It was pointed out, however, that an individual having acquired tolerance to morphine may use codeine to satisfy addiction, although codeine would not be the drug of choice, a peculiar crossed tolerance being acquired.

Dr. William C. Woodward, representing the American Medical Association, sounded a word of caution that the conference should not leave the impression that there was no such thing as a codeine addict. Such addicts have been observed by reputable and competent physicians. The removal of restrictions from the use of codeine would render possible a traffic for illicit purposes.

In further discussion of the advisability of analyzing hospital records, Mr. S. L. Hilton, of the American Pharmaceutical Association called attention to the necessity for control of narcotics in hospitals, and the desirability of their being under the supervision of one person and reported upon at regular intervals. Mr. Hilton, in discussing the advisability of analyzing prescription records on file in pharmacies, with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels of narcotic drugs as a basis for determining the normal and scientific requirements, and what official and unofficial agencies may be expected to furnish this information, pointed out that there were some 50,000 to 55,000 pharmacists in the United States and it would be a monumental task to analyze the prescriptions in their files. He thought it possible, however, that certain State organizations might be willing to assist in determining exactly what was being done by retail pharmacists. In general, Mr. Hilton was of the opinion that there should be some analysis of prescriptions on file in pharmacies, with special reference to where and for what purpose excessive amounts of drugs are being prescribed and dispensed. This representation assumed the flavor of a regulatory function in an effort to stop illegitimate uses.

Colonel McLean, of the American Hospital Association, in discussing the question of analyzing pharmacists' records, pointed out that they were required to make monthly reports by local and State narcotic laws, and that those charged with administering the State narcotic laws, particularly in Pennsylvania, make close checks upon the prescriptions on file.

Dr. C. E. Terry reported some experiences resulting from the analysis of prescriptions on file, showing that a large number of drug addicts were being furnished supplies through the legal channels and that those who were border-line addicts were also receiving large quantities. He discussed some ill-advised uses of narcotic drugs, especially the placing of considerable quantities of morphine in the hands of inexperienced persons for self-medication, and the ill-advised combination of opium or its derivatives with other drugs and pointed out the danger of producing addiction through this ill-advised use. He thought that an analysis of pharmacists' records and physicians' and dispensing records was a most important matter, because of its possibilities in correcting the misuse of narcotic drugs by the medical profession. He pointed out, however, that any attempt seriously to interfere with the legal prescribing of opium or its derivatives might result in very great and undue hardships, that the present-day prescribing of these drugs represented medical

custom, and that any corrective measures must, of necessity, involve the question of medical education.

Proceeding with the other items on the agenda, discussion of the questions "The advisability of analyzing the records of dispensing physicians with reference to the indispensable uses, the ill-advised uses, and diversions from legitimate channels, of narcotic drugs * * *" and "The advisability of analyzing the records of pharmacists and dispensing physicians with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels of the so-called exempt preparations containing narcotic drugs, and what official and unofficial agencies may be expected to furnish these data," was opened by Dr. William C. Woodward, of the American Medical Association. Doctor Woodward thought that there would be no special difficulty in checking up the prescription records of practicing physicians, but that there would be, in different parts of the country, a considerable variation in customs and practices as to the use of these drugs, and that a variable norm would be the theoretical expectation. Because of this variability, he considered the problem a complicated one. He further pointed out that an analysis of methods of prescribing by physicians involves directly the activities of the machinery engaged in administering the narcotic laws, and that this machinery must take into account the question of individual judgment of physicians, on the one hand, and willful violation of the law, on the other hand.

Asst. Surg. Gen. R. C. Williams, of the United States Public Health Service, opened the discussion upon the advisability of utilizing morbidity and mortality reports and statistics as a basis for estimating the sickness expectancy rate for various types of illnesses and utilizing such data for arriving at the amount of narcotic drugs required for medicinal purposes. He called attention to the survey conducted by the Public Health Service of the sickness incidence in Washington County, Md., and of the sickness incidence of New York State, and stated that data of this sort might be utilized in computing the expectancy of narcotic drug needs, and that such data might be used in helping to determine the requirements of narcotic drugs to meet emergency needs incident to epidemics.

The next question on the agenda was "The advisability of undertaking an educational program on the indispensable uses of narcotic drugs and what official and unofficial agencies may be expected to contribute to such a program," and Dr. William Charles White, chairman of the drug committee of the National Research Council, was asked to comment upon this phase of the subject. In his discussion Doctor White drew a parallel to the educational campaigns that have been carried on, not only with reference to the drug-addiction situation, but with reference to tuberculosis, cancer, syphilis, and alcohol,

without seeking a wider and broader program of prevention. He called attention to the work of the drug committee of the National Research Council, which was faced with the problem of education and has come to the conclusion that the proper unit of education was through the physician and his clientele, and that any educational program to be effective must be carried on through the physician, out of which could grow the education of the public. Such an education must necessarily be in the hands of physicians. It appeared desirable to obtain a composite and authoritative cross-section opinion of the desirable uses of these drugs in the practice of medicine and in the treatment of specific types of illnesses. To meet such a need and to evolve informative memoranda which might be placed in the hands of practicing physicians, it was proposed that the cooperation of the American Medical Association, through its Council of Pharmacy and Chemistry, the drug committee of the National Research Council, the United States Public Health Service, and a group of representative members of the professions, be enlisted for the preparation of such memoranda. Progress has already been made in this direction through the Journal of the American Medical Association, which has accepted the task of revising articles written by individuals and passed upon by these various organizations which will be, eventually, available for utilization by the practicing physician and ultimately reflect itself in his clientele.

Further discussion indicated the desirability of replacing the present legitimate use of derivatives of opium and its preparations by some substance which might be expected to possess the physiological action of opium less its addiction properties. Such a situation has already developed in the medical and dental professions with reference to cocaine.

Dr. Mark Finley, representing the American Dental Association, emphasized the decreasing quantities of cocaine used by the dental profession and the desire of the American Dental Association to cooperate in every way possible to prevent the diversion of narcotic drugs from legitimate channels.

The comments of Mr. Robert P. Fischelis, representing the American Medical Editors' and Authors' Association, who is also secretary of the Board of Pharmacy of the State of New Jersey, called attention to the possibilities and the dangers of addiction to habit-forming drugs being caused through the use of so-called exempt preparations and to the work of the Board of Pharmacy of New Jersey in the matter of restricting the number of dealers in these exempt preparations. He mentioned also the cooperation obtained through those charged with the enforcement of the Federal narcotic laws. He pointed out, however, the necessity for an educational campaign for better control of the exempt preparations.

Prof. E. G. Eberle, editor of the American Pharmaceutical Journal, thought that the Pharmaceutical Association of Secretaries and the law-enforcement officials having to do with pharmaceutical matters might be interested in an educational program.

Prof. Reid Hunt, of the Harvard Medical School, representing the National Research Council and the American Medical Association, called attention to the progress which has been made in the past 50 years in the evolution of drugs which have sedative and pain-relieving qualities, and the possibilities of finding some substitute for opium or its derivatives. The possibilities of substituting other drugs for opium or its derivatives was emphasized by Dr. William C. Woodward, of the American Medical Association, and by Capt. W. H. Bell, of the Navy Department.

Mr. Tennyson, of the Bureau of Narcotics, called attention to the desirability of carrying on an educational program in State and local jurisdictions with reference to the necessity for more uniform State laws and for carrying them into effect. These matters were further brought to the attention of the conference by provision of the act approved June 14, 1930, which authorizes the Treasury Department to cooperate with the several States in the suppression of the abuse of narcotic drugs in their respective jurisdictions.

The Surgeon General evinced an interest in the question of developing a substitute for opium or its derivatives, but pointed out that the evolution of such a synthetic, nonhabit-forming substitute was not germane to the questions before the conference.

Dr. C. Willard Camalier, of the American Dental Association, ventured the opinion that it might be practical to circularize the several registrants as to the quantities of drugs used by them, but mentioned the fact that most of this information would be on file in the Bureau of Narcotics for analysis.

Colonel McLean, representing the American Hospital Association, ventured the suggestion that the association might be requested to establish standards for the purpose of securing better control of narcotic drugs in all hospitals in the association. This was put in the form of a resolution recommending that more specific records be maintained by hospitals seeking to control narcotic drugs. It was seconded by Prof. E. G. Eberle, of the American Pharmaceutical Association, and unanimously carried.

The Surgeon General then called attention to a previous item appearing on the agenda concerning the advisability of analyzing prescription records on file in pharmacies, and Dr. C. E. Terry, of the committee on drug addictions, New York City, believed, from his experience, that no other method could be as valuable for determining the legitimate medical needs. At least it would determine the

current medical uses, having no connection, of course, with whether such use be advised or ill advised. Such records, however, are those required for the control of narcotic drugs by Federal narcotic laws, and only by an analysis and study of these records could one be expected to determine the quantities of these drugs needed. Doctor Terry offered a motion that the Public Health Service study the records, not only of pharmacists but of dispensing physicians, and that such a study should have for its object a determination of the present advised and ill-advised uses of opium and cocaine with the end in view of using these data as a basis for better medical education in the uses of these drugs.

Dr. E. F. Kelly, of the American Pharmaceutical Association, tendered the cooperation of that organization in any study of the records of pharmacists that the Public Health Service might wish to undertake. He called attention to the long record of the American Pharmaceutical Association, which has advocated since 1852 the drastic control of dangerous drugs. He referred to his discussion of the morning, however, when an opinion was expressed that the records which are available to those administering the Federal narcotic laws are probably all sufficient for purposes of analysis. He stated that such records may be supplemented through that particular channel, but that the Public Health Service was the proper agency for giving appropriate advice, and that the American Pharmaceutical Association tenders its offer of support.

Dr. William C. Woodward, of the American Medical Association, called attention to the fact that, while he was a member of the committee appointed by the American Medical Association to attend the conference, he had no authority to represent the views of that association, since the by-laws and constitution provided that the policies of the association could be made only by the house of delegates or, in the absence of the house of delegates, by the board of trustees. He said, however, that the Public Health Service could count upon his cooperation and the cooperation of the several groups represented at the conference. He suggested the appointment of one representative of each of the organizations present to study further the outcome of the conference.

Dr. William Charles White offered a resolution, as expressing the sense of the conference, that the United States Congress should provide funds for carrying out the functions of the agencies of the Government concerned with the problem under discussion. Mr. Carson P. Frailey seconded the resolution on behalf of the American Drug Manufacturers Association, but the Surgeon General expressed the belief that, when the question was placed before responsible officers of the Government and the Bureau of the Budget, sufficient

funds would be made available for carrying on the functions. He expressed some embarrassment, as chairman, in putting a motion of this particular kind. Doctor White, therefore, asked that he be permitted to request a vote upon the resolution. This permission was granted, and the resolution was unanimously agreed upon by the conference.

In closing the conference the Surgeon General expressed his personal appreciation, and the appreciation of those associated with him, for attendance at the conference and for the interest shown in the particular subject under discussion; and he expressed the hope that a smaller group, representing the several organizations present, might be assembled to discuss ways and means of carrying out what seemed to have been the general sense and tenor of the deliberations.

PROCEEDINGS OF THE CONFERENCE

Morning Session

The conference was opened by Surgeon General H. S. Cumming.

The SURGEON GENERAL. I want to express my appreciation to you for coming here to-day. I know that many of you have broken up your vacations in order to be here.

I am quite sure all of you are familiar with the act approved June 14, 1930, by which there was created a Bureau of Narcotics, of which Mr. Anslinger is the responsible head; and, in section 4 of that act there is created a provision affecting the Public Health Service, under subsection (b), reading as follows:

> The Surgeon General of the Public Health Service is authorized and directed to make such studies and investigations, as may be necessary, of the abusive use of narcotic drugs; of the quantities of crude opium, coca leaves, and their salts, derivatives, and preparations, together with such reserves thereof, as are necessary to supply the normal and emergency medicinal and scientific requirements of the United States; and of the causes, prevalence, and means for the prevention and treatment of mental and nervous diseases. The Surgeon General shall report to the Secretary of the Treasury not later than the 1st day of September each year the results of such studies and investigations. The results of such studies and investigations of the quantities of crude opium, coca leaves, or other narcotic drugs, together with such reserves thereof, as are necessary to supply the normal and emergency medicinal and scientific requirements of the United States, shall be made available to the Commissioner of Narcotics, to be used at his discretion in determining the amounts of crude opium and coca leaves to be imported under the narcotic drug import and export act, as amended.

This is a very grave responsibility, and I have asked you gentlemen, as representatives of national medical, dental, pharmaceutical, veterinarian associations, and of other scientific associations and agencies, to confer with the Public Health Service for the purpose of considering the necessity for and the methods to be used in the conduct of studies and investigations to determine the medicinal requirements of the United States respecting narcotic drugs. This is a new function imposed upon the Public Health Service.

It has seemed to us that the approach to the solution of this situation necessarily involves the inauguration of field surveys and investigations of the quantities of these drugs now used by physicians, dentists, and veterinary surgeons, in hospitals, dispensaries, and in community practice. It also seemed to us, in looking over the field in a preliminary way, that these studies would require eventually the services of technical and clerical assistants, both for

departmental and field duty and, because of the very nature of such studies and investigations, it will involve considerable time and effort before a definite stable estimate can be established as to the needs of the country as a whole.

It seems, for the immediate purpose, obviously impracticable to undertake a nation-wide survey of the uses of these drugs by medical and scientific personnel, but random samplings of sufficient size and diversification should make possible a fairly accurate determination of the needs. However, many complications and difficulties must be surmounted before such a task can be accomplished.

Preliminary to the inauguration of an investigative program, it seemed desirable for the Public Health Service to enlist the cooperation and counsel of the medical, dental, pharmaceutical, veterinarian, and other scientific associations and agencies, both official and unofficial.

In this connection, it is appropriate to point out that the Surgeon General of the Public Health Service is, ex officio, the custodian of medical and scientific opinion respecting the quantities of these drugs necessary for medicinal and scientific purposes. The Public Health Service is, therefore, the official coordinating agency for bringing together a composite opinion of the medical and scientific professions of the United States to bear upon this subject.

I trust, therefore, that you who represent these organizations will find it convenient to enter into the discussion of the necessity for and the methods to be used in carrying out the provisions of the act approved June 14, 1930, relating to the quantities of crude opium, coca leaves, and their salts, derivatives, and preparations, together with such reserves thereof as are necessary to supply the normal and emergency medicinal and scientific requirements of the United States. An agenda dealing with the several phases of this particular problem has been prepared, and it is hoped that the discussions will be confined to the items as set forth in the outline, copies of which have been furnished you.

At this time I desire to introduce to you the gentleman who is in charge of the Bureau of Narcotics, Mr. H. J. Anslinger.

Mr. ANSLINGER. Mr. Chairman and members of the conference, I am very grateful for this opportunity to greet you and to express my appreciation for your willingness to cooperate with the officers of this Government who are charged with the enforcement of the permissive features of the narcotic drugs import and export act.

This willingness to cooperate is definitely evidenced by your presence here, which is apparently made possible through a sacrifice of your business affairs and personal engagements.

As you know, there was recently organized a division of mental hygiene under the Public Health Service, to assist in determining

the medical needs of the United States with respect to crude opium and coca leaves. I wish respectfully to solicit your assistance in helping that governmental agency so that a scientific determination may be made. With such a determination, we can go ahead and authorize the importation of such amounts of crude opium and coca leaves as will meet the needs of professional practice and at the same time prevent an intentional dangerous surplus that might find its way into illegitimate channels.

I know that you are also interested in the policy of the new Narcotics Bureau. We intend to devote most of our attention to detecting and eliminating the more important and the larger illicit narcotic supplies and leave the cases of smaller significance to local and State enforcement officials where conditions and the law are applicable.

I want to say a word about the Surgeon General and his able assistant, Doctor Treadway. I think they are approaching this problem in a most commendable and comprehensive manner. They have definitely demonstrated to you the fact that the Government wishes to deal with you on a fair basis and wants to meet you half way; and I believe, in fact I know, that you will approach us in the same spirit.

The SURGEON GENERAL. It may be desirable to mention at this point that studies and investigations along these particular lines will be administered, as far as the Bureau of the Public Health Service is concerned, through the division of mental hygiene. The function of determining the medicinal needs with respect to narcotic drugs is one of the several investigative and administrative functions imposed upon that division by a recent act of Congress. The division of mental hygiene, formerly the narcotics division, of the Public Health Service, was created for the purpose of administering the so-called narcotic farms for the treatment of drug addicts. The division, however, is charged with an additional responsibility, the name and scope of its activities being changed and enlarged by the act approved June 14, 1930.

I have the pleasure of introducing to you Asst. Surg. Gen. Walter L. Treadway, who is in charge of that division.

Doctor TREADWAY. Surgeon General and members of the conference: I should like to take this opportunity, on behalf of the division of mental hygiene, to welcome you, and I am looking forward with great expectations to the result of your deliberations.

As pointed out by the Surgeon General, the division of mental hygiene is charged with duties both of an administrative and of an investigative character. Briefly enumerated, these duties are as follows:

(1) The administration of the United States narcotic farms authorized by the act approved January 19, 1929.

(2) Studies of the nature of drug addiction and the best methods of treatment and rehabilitation of persons addicted to the use of habit-forming drugs.

(3) The dissemination of information on methods of treatment and research in this particular field.

(4) Cooperation with States and local jurisdictions with a view to providing facilities for the care and treatment of narcotic addicts.

These are all functions imposed upon the division by the act of January 19, 1929.

An act of Congress approved May 13, 1930, authorizes the Public Health Service to supervise and furnish the medical and psychiatric services in Federal penal and correctional institutions. Again, on June 14, 1930, the division was charged with making studies and investigations of the abusive use of narcotic drugs and of the quantities of such drugs necessary to supply the normal and emergency medical and scientific requirements of the United States.

In this connection it is desirable to point out that the Public Health Service assumes no regulatory functions with respect to determining these needs, but rather occupies the position of scientific advisor to the Bureau of Narcotics, which is charged with the responsibility of all regulatory measures respecting imports, sale, and distribution of these drugs. In approaching the solution of this particular problem the Public Health Service has in mind two questions:

(1) The necessity for making studies and investigations respecting the quantities of these drugs needed for medicinal and scientific purposes.

(2) The methods to be used in making such studies and investigations.

These questions have been subdivided in the form of an agenda, the morning program dealing with the question of the necessity for studies and investigations, and the afternoon program with methods of study and investigation.

The SURGEON GENERAL. I think it will be advisable to have Doctor Treadway call the roll of the various associations to whom we have sent invitations and to ask that you who represent them kindly give your names so that we will have them in the record for further correspondence, if necessary.

The roll was called, with the following organizations represented:

American Dental Association:
Dr. Mark Finley, 1928 I Street NW., Washington, D. C.
Dr. C. Willard Camalier, Medical Science Building, Washington, D. C.
American Drug Manufacturers Association:
Mr. George W. Merck, Merck & Co. (Inc.), Rahway, N. J.
Mr. S. W. Walker, Merck & Co. (Inc.), Rahway, N. J.

Mr. F. J. McDonough, New York Quinine & Chemical Works, 99–117 North Eleventh Street, Brooklyn, N. Y.

Dr. A. C. Boylston, Mallinckrodt Chemical Works, Second and Mallinckrodt Streets, St. Louis, Mo.

Dr. F. O. Taylor, Parke, Davis & Co., Detroit, Mich.

Mr. A. Homer Smith, Sharp & Dohme, Broad and Wallace Streets, Philadelphia, Pa.

Mr. Eugene Schaefer, Maywood Chemical Works, Maywood, N. J.

Mr. Carson P. Frailey, executive vice president and secretary American Drug Manufacturers Association, Albee Building, Washington, D. C.

American Hospital Association:

Col. John D. McLean, medical director Rush Hospital, Philadelphia, Pa.

American Institute of Homeopathy:

Capt. Joel T. Boone, United States Navy, the White House, Washington, D. C.

Dr. J. B. Gregg Custis, 1860 Columbia Road NW., Washington, D. C.

American Medical Association:

Dr. W. C. Woodward, director Bureau of Legal Medicine and Legislation, 535 North Dearborn Street, Chicago, Ill.

Dr. R. L. Anderson, 500 Penn Avenue, Pittsburgh, Pa.

Prof. Reid Hunt, Harvard Medical School, Boston, Mass.

Southern Medical Association:

Dr. C. P. Loranz, Birmingham, Ala.

American Medical Editors' and Authors' Association:

Prof. E. G. Eberle, editor, American Pharmaceutical Journal, Baltimore, Md.

Dr. Robert P. Fischelis, secretary, Board of Pharmacy, Trenton, N. J.

American Pharmaceutical Association:

Prof. A. G. DuMez, School of Pharmacy, University of Maryland, Baltimore, Md.

Mr. S. L. Hilton, 1033 Twenty-second Street NW., Washington, D. C.

Dr. E. F. Kelly, 10 West Chase Street, Baltimore, Md.

Dr. R. L. Swain, 2411 North Charles Street, Baltimore, Md.

American Veterinary Medical Association:

Dr. John P. Turner, 1357 Kennedy Street NW., Washington, D. C.

Dr. R. S. Amadon, University of Pennsylvania, Philadelphia, Pa.

Dr. H. J. Milks, New York State Veterinary College, Ithaca, N. Y.

Bureau of Social Hygiene (Inc.)

Mr. John D. Farnham, 61 Broadway, New York City, N. Y.

Committee on Drug Addictions, New York:

Dr. C. E. Terry, executive, 61 Broadway, New York City, N. Y.

National Medical Association:

Dr. William H. Wilson, 1515 Tenth Street NW., Washington, D. C.

National Research Council:

Prof. Reid Hunt, Harvard Medical School, Boston, Mass.

Dr. Wm. C. White, National Institute of Health, United States Public Health Service, Washington, D. C.

Dr. Walter L. Treadway, Assistant Surgeon General, United States Public Health Service, Washington, D. C.

Prof. Claude S. Hudson, National Institute of Health, United States Public Health Service, Washington, D. C.

The Chemical Foundation (Inc.):

Mr. William W. Buffum, treasurer and general manager, 654 Madison Avenue, New York City, N. Y.

The National Association of Retail Druggists:
Mr. Frank T. Stone, 1210 Pennsylvania Avenue NW., Washington, D. C.
Mr. Ambrose Hunsberger, 1600 Spruce Street, Philadelphia, Pa.
Department of Agriculture:
Dr. F. J. Cullen, medical officer, Drug Control, Food and Drug Administration, Washington, D. C.
Dr. H. E. Moskey, veterinarian, Drug Control, Food and Drug Administration, Washington, D. C.
Department of the Interior:
Dr. L. W. White, Bureau of Indian Affairs, Washington, D. C.
Navy Department:
Capt. W. H. Bell, Medical Corps, United States Navy, Washington, D. C.
War Department:
Lieut. Col. E. C. Jones, Medical Corps, United States Army.
State Department:
Mr. J. K. Caldwell, State Department, Washington, D. C.
Mr. Stewart J. Fuller, State Department, Washington, D. C.
Treasury Department:
Bureau of Narcotics—
Mr. S. H. Breidenbach, statistician, Washington, D. C.
Mr. A. L. Tennyson, legal adviser, Washington, D. C.
Mr. H. J. Anslinger, acting commissioner, Washington, D. C.
United States Public Health Service—
Dr. Walter L. Treadway, Assistant Surgeon General, Division of Mental Hygiene, Washington, D. C.
Dr. G. W. McCoy, Director National Institute of Health, Washington, D. C.
Prof. Claude S. Hudson, Chief, Division of Chemistry, National Institute of Health, Washington, D. C.
Mr. Selwyn D. Collins, associate statistician in charge, Statistical Investigations, Washington, D. C.
Mr. Rollo H. Britten, associate statistician, Industrial Hygiene and Sanitation, Washington, D. C.
Mr. R. D. Kinsey, chief pharmacist, supply depot, Perry Point, Md.

The SURGEON GENERAL. The first question on the agenda under the general topic "The Necessities for Studies and Investigations" is "Federal Control of Narcotic Drugs Respecting Imports, Manufacture, Distribution, and Sale." The discussion will be opened by Mr. Alfred Tennyson, legal adviser, Bureau of Narcotics.

Federal Control of Narcotic Drugs Respecting Imports, Manufacture, Distribution, and Sale

Mr. TENNYSON. Gentlemen, most of what I am about to say is known, I think, by pretty nearly everyone here, but I thought perhaps a brief discussion of the general system of control might be interesting to those who may not be so familiar with it.

The procedure heretofore with respect to the importation of crude opium and coca leaves, which are the only narcotic drugs allowed to enter the United States, has been, under the régime of the Federal Narcotics Control Board, to give representatives of

the several narcotics manufacturers hearings, usually annually, for the purpose of presenting their needs for sales for medical purposes.

After collecting these data and checking them and supplementing them with the information shown on the regular monthly returns of all importers and manufacturers and wholesalers, the representatives of the board have arrived at figures which they deemed appropriate to supply the medical and legitimate needs, and thereupon they have made an allotment of the quantities of crude opium and coca leaves for the several months, based on their sales requirements for the year.

The theory has been that, with the control imposed domestically under the Harrison antinarcotic law, this figure has fairly met the medical needs of the country. We have not, of course, had the benefit of scientific investigation, such as is now about to be afforded the commissioner of narcotics.

When the allotments are made, the procedure will be that each manufacturer, as his needs arise, will make application on the regular form for permission to import narcotics, and thereupon a permit will be granted by the board in quintuplicate. One copy is sent to the manufacturer for his files and another copy is sent to him for transmittal to the foreign exporter. One copy is sent to the American consul at the port of exportation in the foreign country and one copy is sent to the collector of customs at the port of import.

When the quantity of crude opium or coca leaves, as the case may be, is shipped, the exporter takes his green copy to the consul with the invoice. The consul compares the green copy which he receives from the exporter with the copy he receives from the Treasury Department, through the Department of State, and if he finds that the items are correct, he consumates the invoice. When the shipment arrives at the port of import, the collector of customs also compares the green copy which he has received with the original copy, and definitely assures himself that there has been no change and that the importation complies with all rules and regulations, and thereupon he allows the shipment to be imported.

The collector of customs, through the appraiser, assays the opium, ascertains its morphine content, and makes a report on the morphine content to the commissioner of narcotics. Thereupon the importer removes the drugs from the custody of the customs and takes them to the place of manufacture.

Any person can import these drugs as long as he is registered as an importer under the Harrison Antinarcotic Act and pays a tax of $24 a year. When the importer removes the drugs from customs' custody, he manufactures the drugs—that is, morphine, cocaine, or codeine—and makes a regular monthly report. He must show on the report all importations, all goods placed in process, goods re-

moved from process, and taxable goods sold, together with all returns from the customers he may have.

The importer sells, generally, to the wholesale dealer. The wholesale dealer is one who may sell only in the original tax-stamped package.

The wholesale dealer, in his turn, has to make a regular monthly return showing all the narcotic drugs that he receives from the manufacturer and all that he sells, generally, to the retail trade.

The retail dealer does not have to make a monthly return, but does have to make an annual inventory and must also register with the collector of internal revenue, in the same manner as does the wholesale dealer.

It will be seen that there is a complete record of all narcotic drugs from the time they are imported through their manufacture down to the consuming class of dealers, if I may term them such, which are the retail druggists, physicians, dentists, and veterinarians.

If any transfer of narcotic drugs is made, it must be pursuant to an official order form issued by the commissioner, one copy of which must be retained by the purchaser or receiver of the narcotics and kept on file for a period of two years for examination by any internal revenue officer who may come in to inspect it, and the copy that the vendor or shipper of narcotics receives must be retained for two years for similar inspection.

Now, there is just one point that I should like to impress upon you in connection with the determination of the quantities of opium required for medicinal purposes. It has occurred to us who have had close contact with the work for the last several years that some attention ought to be paid to the matter of narcotic drugs used in exempted preparations.

We know that a great quantity of narcotic drugs which go into preparations are sold, in those preparations, largely through doctors' prescriptions, but a great many are not sold on prescriptions and yet may be lawful, if used for medical purposes.

I think a study and investigation in our bureau will show that, in terms of opium, perhaps one-quarter of the total quantity of opium imported goes into exempt preparations manufactured by pharmaceutical manufacturers. Of course, there is an additional quantity which goes into exempt preparations which are manufactured by similar manufacturers of some preparations for perhaps legal consumption. These preparations can be made without prescription provided they are sold for medical purposes.

We have been rather concerned with the fact that perhaps this phase of supply for medical needs may be overlooked in any inquiry which is made, because, unless a doctor prescribes a preparation, he does not know very much about its sale.

However, since the sale of these preparations is legalized by medical prescription, and since they can be gotten without a medical prescription, we believe these facts ought to be taken into consideration in arriving at the quantity of opium necessary. Mr. Breidenbach will perhaps give a little more data on this subject.

The SURGEON GENERAL. Does anyone wish to say anything about this particular phase of the problem?

Doctor TREADWAY. I wonder if Mr. Tennyson made it clear as to registrants in classes 1, 2, 3, 4, and 5? That is, a registrant in any one of these classes may be registered in more than one class.

Mr. TENNYSON. I think Mr. Breidenbach will clear that up.

The SURGEON GENERAL. The second subject on the agenda is "Statistical Analysis of Sales and Distribution of Narcotic Drugs in the United States, with Special Reference to Medicinal Requirements," and I am going to ask Mr. Breidenbach, statistician of the Bureau of Narcotics, if he will please open the discussion.

Statistical Analysis of Sales and Distribution of Narcotic Drugs in the United States, With Special Reference to Medicinal Requirements

Mr. BREIDENBACH. Mr. Chairman and gentlemen of the conference, I know how you feel when one suggests a question of statistics, but I desire to say that some one took pity on you yesterday. I had a great many statistics prepared and available for your consideration here, but some one removed this material from my automobile yesterday, and although I have enlisted the aid of the police and the lost and found column in the newspapers, it has not yet been returned.

My brief remarks will be concerned more with what statistics are available than with giving you large numbers of figures.

Mr. Tennyson has called your attention to the fact that opium and coca leaves, before coming into this country, are taken up by the manufacturers and each manufacturer makes a report of the drugs manufactured from them.

We have, under the Harrison antinarcotic law, five classes under which the manufacturers, dealers, and dispensers of narcotic preparations are registered. The first class, which we call class 1, includes the importers and manufacturers, producers, and compounders.

Class 2 includes only the wholesale dealers in narcotic drugs—that is, those who deal in drugs in the original stamped packages only, buy them in those packages, and resell them in those packages. Class 3 includes the retail druggists. Class 4 includes physicians, dentists, veterinarians, and other practitioners; and class 5 includes the manufacturers and dealers in exempted preparations.

Persons registered in classes 1 and 2 render to us monthly reports. These monthly reports contain a great deal of statistical data. So far as the manufacturers registered in class 1 are concerned, these data are very detailed and very readily available for statistical purposes.

The reports rendered by the wholesale dealers show in detail the purchases and sales, with a very brief summary which is rather unsatisfactory for any statistical use, first, because the kind of narcotic contained in the preparation sold or purchased is not always stated; second, because, if stated, it is not always computed as to its narcotic content; and, third, because it is not classified in such a way as to be readily available for statistical purposes.

Persons registered in classes 3, 4, and 5—that is, the retail druggists, practitioners, dealers in and manufacturers of exempt preparations—render no monthly returns to us. They are required to keep certain records and are subject to periodic inspections which, of course, enable us to effect a control over their business; but we have no information from them which gives us any statistical data on the drugs used by them in their various functions.

Persons registered in classes 3, 4, and 5, however, can purchase their drugs only from persons registered in classes 1 and 2; and since we get each month reports from persons registered in classes 1 and 2 showing their transactions in detail, we have the purchases made by the persons registered in classes 3, 4, and 5.

We are unable to tell from the reports rendered just what amount of narcotic drugs of any kind in the course of a given time are purchased and used by class 5 registrants, by class 4 registrants, or by class 3 registrants, because they are not classified in such a way. The material is there; but like ore in the ground, it needs to be mined. However, we have never had sufficient personnel to gather, classify, and compile that data.

So the statistics available in the bureau of narcotics on which any reliance can be placed for the purpose of determining the needs of narcotic drugs must all be determined from the reports rendered by the manufacturers registered in class 1, and the figures which we have for you this morning all relate to manufacturers; they take no cognizance of the quantities that may be on hand in the possession of class 2, 3, 4, or 5 registrants at any given time.

Beginning with June 30, 1930, and semiannually thereafter, we will have statistics available of the quantities of drugs on hand on June 30 and December 31 of each year in the possession of wholesale dealers, registered in class 2. For past periods we do not have this information.

The importations of opium for the past four calendar years—that is, 1926 through 1929—are as follows:

Year	Pounds
1926	142,941.75
1927	140,935.75
1928	98,295.50
1929	169,742

Now, during the year 1926 there was placed into the manufacture of exempt preparations by class 1 manufacturers alone 17,756.79 pounds of opium. This figure does not include the quantities of opium, morphine, and other drugs placed in the manufacture of exempt preparations by persons registered in class 5.

I might say here, incidentally, that this does not represent an accurate figure, because the drug was put into the process of manufacture in the form of medicinal opium, morphine, codeine, etc., and this represents the crude opium equivalency on the basis of the average opium assay imported during the year 1929.

During the year 1926 the domestic sales of narcotic drugs represented an opium equivalency of 116,660.04 pounds.

The exports for that year represented an opium equivalency of 137.83 pounds.

The net result of the year's transactions appears to be that 142,941.75 pounds were imported and 134,554.66 pounds were put into medicinal channels.

The figures for 1927 are as follows:

	Pounds
Placed in the manufacture of exempt preparations, drugs representing an opium equivalency of	17,969.49
Domestic sales (by months)	134,349.67
Exports	214.78

The net result of the year's transactions shows an importation of 149,935.75 pounds and placed into medicinal channels, an equivalency of 152,533.94 pounds.

That means the manufacturers were drawing on reserve stocks during the year 1927.

The figures for the year 1928 are—

Into exempt preparations, 25,848.84 pounds.

Domestic sales, 121,836.04 pounds.

Exports, 260.76 pounds.

The total importations during the year were 98,295.50 pounds, as against an equivalency of 147,945.64 pounds placed into medicinal channels.

For the year 1929—

Into exempt preparations, 27,184.74 pounds.

Domestic sales, 137,141.82 pounds.

Exports, 186.39 pounds.

Total imports during the year were 169,742 pounds, and there were placed into medicinal channels an equivalency of 164,512.96 pounds.

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During the first six months of the year 1930 there were placed into the manufacture of exempt preparations 8,628.6 pounds.

Domestic sales for four months—we did not have them for the full six months period—were 37,354.85 pounds.

The allotments for importations of opium during the calendar year 1930 were 128,000 pounds. On the basis of the first few months there are probably to be placed into medicinal channels during the year about 135,000 pounds or the equivalent.

Due to incident previously mentioned I do not have very many figures on cocaine, not having had time this morning to gather them together again.

The importations of coca leaves for the last four years are as follows:

	Pounds
1926	293,980.25
1927	252,638.75
1928	243,980.00
1929	135,844.50

Domestic sales of cocaine for those years are as follows:

	Ounces
1926	33,471
1927	37,218
1928	32,381
1929	37,295

The manufacturers had on hand, at the beginning of the year 1929, 35,601 ounces of cocaine, and they produced 16,993 ounces during the year.

I might call your attention to the variation between the quantity produced, 16,993 ounces, and the quantity sold, 37,295 ounces—obviously a drawing on the reserve supply.

There were on hand at the end of the year approximately 17,675 ounces.

I should like to call your attention again to the fact that these quantities on hand refer only to the manufacturers. They do not include the quantity on hand by wholesale dealers, retail dealers, physicians, and manufacturers of exempt preparations.

In summary, it would appear that from the figures for the past four years from 17,000 to 27,000 pounds of opium imported annually go into manufacture of exempt preparations, and from 116,000 to 137,000 pounds go into the manufacture of drugs for domestic medicinal consumption. I am only giving round figures now.

The exports are negligible in comparision. Five hundred pounds of opium will make all the articles that are exported in any year.

The sales of cocaine range from 32,000 to 37,000 ounces per year. The allotments of coca leaves for the year 1930 amount to 201,500 pounds.

I trust that these figures may be of some value to you in your discussion and in arriving at a basis for determining the medicinal needs.

Mr. TENNYSON. Did you have time to subdivide those importations of coca leaves between Peru and Java?

Mr. BREIDENBACH. Only for 1929.

Mr. TENNYSON. I thought you might call attention to the varying yields.

Mr. BREIDENBACH. For the year 1929 the importations of coca leaves are divided as follows: 113,546 pounds from Peru, 22,298.5 pounds from Holland.

The 1930 allotments for the importation of coca leaves authorizes the importation of 151,500 pounds of Peruvian leaves and 50,000 pounds of Java leaves. The Peruvian leaves are only about one-half as strong in cocaine content as the Java leaves.

The SURGEON GENERAL. Is there any discussion of Mr. Breidenbach's very interesting statement? If there are any questions, I am sure he will be glad to answer them.

Doctor WHITE. Mr. Breidenbach, do these amounts include the alkalies imported?

Mr. BREIDENBACH. They include only the crude opium and coca leaves coming into this country.

Doctor WHITE. Has any computation been made in your office with reference to the increased consumption compared with the increase in population?

Mr. BREIDENBACH. We figure a per capita consumption each year on the basis of the latest estimate of the population furnished by the Bureau of the Census.

Doctor WHITE. You have a figure showing an increase, for instance, in domestic sales from 116,000 to 137,000. Would that be about comparable to the normal increase in population?

Mr. TENNYSON. If I may answer that, I do not think that the rate has been in accordance with the increase in population. I think the increase has been due largely, according to our figures, to the increase in the use of codeine. The sales of morphine—and I think Mr. Breidenbach will bear me out in this—for the last four years have been practically constant. They have amounted to about 116,000 ounces. The use of codeine has increased, largely, we think, due to the influenza epidemic. Manufacturers depleted their stocks in taking care of the epidemic and had to import a great quantity to replace those depleted stocks.

Mr. BREIDENBACH. Under the act of June 27, 1924, opium was forbidden to be imported for use in the manufacture of heroin and those preparations which largely contained heroin were, thereafter, made of codeine, and a large quantity of codeine had to be put in to obtain the same medicinal results. Of course the same relative quantities of heroin and codeine can be manufactured from equivalent quantities of opium, but the increased quantities of opium used do not necessarily mean an increase in the dangerous habit-forming drugs.

Mr. HILTON. May we have the figures for the last four years covering codeine to show what that use of codeine is?

Mr. BREIDENBACH. The figures for codeine are as follows:

	Pounds
1926	59,169.36
1927	67,012.22
1928	65,713.78
1929	73,747.31

I call attention to the fact that the increase from 116,000 to 137,000 pounds was for all domestic sales, an increase of 21,000 pounds, 14,000 pounds of which represents the increase in codeine.

Mr. HILTON. I would like to ask whether or not that is pounds or ounces. I can not see how you can get that quantity of pounds out of the quantity of opium. Is not that ounces instead of pounds?

Mr. BREIDENBACH. No. I am speaking of opium equivalents; that is, this is the quantity of opium represented by the codeine sold.

Mr. HILTON. This was the quantity of opium used, but it is not the actual quantity of codeine?

Mr. BREIDENBACH. No.

Mr. TENNYSON. We can give the figures in codeine.

Mr. HILTON. Well, if you have the figures prepared, I would like to have that also.

Mr. BREIDENBACH. I have the figures. If you want the codeine figures in ounces, I can give that to you.

Mr. HILTON. I think it would be well to have it.

Mr. BREIDENBACH. In 1926 the figure for codeine, in ounces sold, was approximately 130,329 ounces. For 1927 it was 147,604 ounces, for 1928 it was 144,744 ounces, and for 1929 it was 162,439 ounces. There was an increase of 32,000 ounces from 1926 to 1930.

The SURGEON GENERAL. We shall be glad, if there are any other figures you wish inserted, to place them in the record.

Dr. REID HUNT. I would like to ask Mr. Breidenbach to define the term "medicinal channels."

Mr. BREIDENBACH. "Medicinal channels," as I used the term, includes the preparations that are exempt under the Harrison anti-narcotic law. That is, it includes opium which went into the manu-

facture of those preparations. I have that divided, for convenience, into three sections: (1) Domestic sales of taxable preparations; (2) exports; and (3) quantities used in the manufacture of exempt preparations.

The SURGEON GENERAL. Is there any further discussion of this subject, or are there any questions?

Doctor WOODWARD. I would like to ask whether any computation has been made of the quantities of narcotic drugs that are seized annually and that are turned over to the various branches of the Federal Government for governmental purposes. Obviously those purposes are perfectly legitimate, and in determining the quantity necessary to be imported annually, we must make allowances for the amount that has been obtained from that source heretofore.

Mr. TENNYSON. Generally speaking, the drugs seized under illicit traffic are not such as are readily available for medicinal use. No physician would accept them to dispense directly to a patient, because there is a strong suspicion that they are adulterated with various bicarbonates. The quantities of legitimate drugs which are seized, that is to say, those which may be turned over by druggists going out of business and which have the manufacturer's label and the tax-paid stamp, are so small that the dent which they make in governmental medical needs is rather small. We turn over small quantities of these drugs to such units as the Public Health Service, and the Bureau of Engraving emergency room, for instance. The principal channel for our seized narcotics has been the Army base in Brooklyn for use as emergency war reserves. The War Department has a figure that it wants to attain for the accumulation of emergency war reserves. They are not used currently, but are kept for an unforeseen emergency. Those are the largest quantities, and we have those figures, although I do not have them here. The drugs are in all forms. We even turn over to them smoking opium on the theory that smoking opium, which represents a large proportion of our seizures, contains comparatively high morphine content; and if it ever became necessary, perhaps the manufacturers could extract the morphine from that. We do not accept any responsibility as to the purity of these drugs turned over to the War Department. We can not. They are in cube form, which is the familiar smuggling form; and in the event it is ever necessary to use them they will first have to go through a process of remanufacture and purification.

Doctor WOODWARD. I understand, then, that all the smuggled narcotics are turned over to the War Department?

Mr. TENNYSON. Practically all.

The SURGEON GENERAL. I was wondering whether Colonel Jones would like to make some remarks.

Colonel JONES. The War Department takes over a certain amount of this captured material, as has just been stated. That is stored in a vault at the New York base. The quantity required by the War Department, which we are trying to reach, is a figure that, it has been estimated, will possibly be required in an emergency. That figure has been reached on some few things, I think, and on others it is short. The majority of material which we take over would have to be reworked. We simply store it for an emergency.

The SURGEON GENERAL. Captain Bell, would you like to say something about the Navy reserve?

Captain BELL. For the fiscal year 1931 we have not worked out a definite reserve which we desire, but for the fiscal year 1930 our reserve of the various items expressed in terms of drams is as follows: Opium, 138,636 drams; morphine, 404,984 drams; codeine, 31,458 drams; cocaine, 44,999 drams. The percentage is as follows: Opium, 373.27 per cent of our normal requirements, morphine, 262.74 per cent of our normal requirement; codeine, 14.02 per cent; cocaine, 29.33 per cent.

That, as I say, represents both the normal plus a per cent given of the normal as the reserve.

Doctor WOODWARD. There is one other question I would like to ask, and that is whether any estimate has been made or any figures are available showing the quantity of the decocainized coca leaves that are imported annually. The recent act changed the status of coca leaves very considerably, and I thought the record of the importations of decocainized coca leaves would throw some light on the situation.

The SURGEON GENERAL. I wonder whether Mr. Tennyson or Mr. Anslinger could tell us about that.

Mr. TENNYSON. Up to the present time we have not imported any decocainized coca leaves, and I think Doctor Woodward is under a misapprehension as to the authorization to import decocainized coca leaves. The Porter Act gives authority to import additional supplies of coca leaves, with the provision that, when imported, all alkaloidal contents, that is, cocaine and so forth, shall be destroyed. Up to the present time no coca leaves under that status have been imported. We are at present considering regulations to provide for that.

The SURGEON GENERAL. Is there any further discussion of this topic? Professor Hunt, have you anything to say about exempt preparations?

Doctor HUNT. No, sir.

The SURGEON GENERAL. The next question is quite an important one: "How important is the theoretical diversion of drugs from

legitimate channels, and what rôle can a scientific study of dispensing methods play in determining the extent of such diversion?" I wonder whether the representative of the American Pharmaceutical Association can give us some information on that subject.

How Important Is the Theoretical Diversion of Drugs from Legitimate Channels, and What Rôle Can a Scientific Study of Dispensing Methods Play in Determining the Extent of Such Diversion?

Doctor KELLEY. Mr. Chairman and gentlemen, I am directed by our president to express our appreciation of the invitation to attend this conference and to assure you and those working with you of our fullest cooperation in your undertaking.

Since the receipt of this invitation, we have reviewed as well as we could such information as was available on which we could base an expression of opinion, and, fortunately, what we had reviewed has been practically confirmed by the data which have been presented here to-day.

We can not imagine any study of the theoretical diversion of drugs from the legitimate channels which would serve the purpose better than these statistics and such information as is available from the enforcement of the Harrison Antinarcotic Act. It would seem from the information which has been given out that the diversion of drugs from legitimate channels is comparatively small, based upon the number of infractions of the Harrison Act itself.

Furthermore, it seems to be a fact that a majority of those infractions are technical violations of the act rather than cases of actual diversion. If those figures are correct and this information is correct, it would seem to us that the diversion of narcotic drugs from the legitimate channels must be comparatively small. We realize that any diversion at all is a regrettable incident, of course, and should be corrected, but we think it is important to point out that based on those facts the diversion must be comparatively small.

When it comes to the second phase of the question, the rôle which a scientific study of dispensing methods plays in determining the extent of such diversion, we have to come back more or less to the same premise. It would seem to us that the most satisfactory study of any diversion should be based upon the statistics of the enforcement agencies. They have access to every possible figure, with the exception of certain statistics of sales, which has been pointed out here to-day. It would seem to us that a study of the data which is available through the enforcement of the Harrison Antinarcotic Act over a number of years would probably be more accurate and more dependable than any other study which could be made if for no other reason than that those who have charge of the enforcement of the act have a legal status and can examine the records of all persons

authorized to handle narcotics in a way that no unofficial agency probably could do.

So our conclusion is that probably a more complete study of the information which is available from this source would be more satisfactory than any other study that could be undertaken. There is one exception which we intended to bring up, and that is the case of exempt preparations. We feel that that is probably a condition in the local enforcement act which should be most carefully studied and with your permission I am going to ask that Dr. R. L. Swain, one of our representatives, who is a deputy food and drug commissioner of the State of Maryland, and who has had some experience in this particular phase of the question, be given a few minutes to add to what I have had to say.

The SURGEON GENERAL. We shall be glad to hear from Doctor Swain.

Exempt Narcotic Preparations Require Further Study

Doctor SWAIN. Gentlemen of the conference, in preparing this very short paper I did not have access to the data which the statistician of the Bureau of Narcotics has brought out, although, relatively speaking, the conclusions which I have come to are supported by the figures which have been given to you. Nor did I have an opportunity to confer with Attorney Tennyson, although the views which I am going to express are somewhat similar to his. They may bring out a point, and I hope they will, that is probably a different thought.

In dealing with any study of narcotic drugs, and especially when that study embraces the possible diversion of such drugs to illegal use, some attention should be given to that class of products referred to officially as "exempt preparations." These preparations are provided for in section 6 of the Harrison Antinarcotic Act and are referred to in article 1 of the regulations issued thereunder. The distribution of them as well as the control in other matters is granted by authority of the law under the provisions of class 5 registration.

The law specifically demands that exempt preparations be sold or distributed as medicines. This language would seem to presuppose some knowledge of the content of the preparations and their use as a basis for the sale. Assuming that all registrants under the law are competent to comply with its demands, it would appear that the law presupposes some knowledge of the content of exempt preparations and their legitimate medical uses and properties on the part of those who register for the purpose of dealing with narcotic drugs under the terms of the law. This fundamental conception should control in the sale and distribution of exempt narcotic preparations.

This, however, is not the case. In Maryland alone there are 500 vendors of exempt preparations, licensed under class 5 of the Harrison Antinarcotic Act. It is a safe assumption that not 1 per cent of them knows anything about the composition of the products and thus little more of their medical uses which the law itself seems to take for granted. This is a curious situation indeed, but it becomes even more so when the actual conditions surrounding the sale of exempt preparations are fully appreciated.

The Federal law requires records of sale, and provides for inspection of these by qualified officials. Aside from the professional classes embraced in medicine, dentistry, pharmacy, and veterinary medicine, there are not much data available dealing with the sale of exempt preparations. The Government does not make any effort, worthy of the name, to keep in touch with class 5 registrants. There is practically no supervision and little inspection. I have frequently talked with such dealers who have been registered for years who have never been called upon to produce their records. Under such a system the keeping of records is likely to be no more than a mere formality.

This statement is not to be considered as a criticism of the Government, for such is not my intention. In Maryland, the District of Columbia, Virginia, West Virginia, North Carolina, and South Carolina there are not more than 20 persons engaged in enforcing the provisions of the Harrison Act. Considering the large cities, the ports of entry, and other factors, it becomes quite obvious that little, if any, attention can be given to the dealers referred to here.

From the statements herein made, using the population of Maryland as a basis for the computation, it would appear that there are over 50,000 licensed dealers legally authorized to distribute exempt narcotic preparations. The actual number is likely much higher. These distributors know nothing of the nature of the products, are not sufficiently informed about them to meet the requirements of the law, and operate with little or no legal supervision. That exempt preparations may play an important part in narcotic drug addiction is well known. So important is it that recent press reports quote Col. L. G. Nutt as requesting manufacturers to use cocaine in place of morphine in such preparations. There are some widely known and widely used exempt preparations which are well adapted to the needs of the addicts.

This conference and all other such bodies interested in the problems incident to the distribution and use of narcotic drugs should give closer study to this subject. The basis for exempt preparations as set forth in section 6 of the law should be given a careful study. The adaptability of the preparation to unlawful use rather

than the narcotic content should be the basis of exemption. There does not seem to be much reason for including a rather pleasant preparation such as the camphorated tincture of opium in the same classification as a lotion of lead water and laudanum or an ointment containing no more than the permitted opium content. The classification can be supported on theoretical grounds. Practical considerations, however, require that the basis for exemption be given further study.

The time is too short for any more extended discussion here. I should, however, like to suggest that a study be made of the advisability of restricting the sale and distribution of exempt preparations to those familiar with their composition and medical uses; that closer cooperation be maintained between State and Federal authorities so that more adequate attention may be given to the sale and distribution of these products; that the whole field of exempt preparations be studied so that section 6 of the Harrison Antinarcotic Act may be amended so as not to include any such preparations as may be used for purposes of narcotic drug addiction.

The SURGEON GENERAL. Is there any further discussion of this subject?

The fourth question on the agenda is: "Is the present system of analyzing manufacturers' and wholesalers' sales adequate to establish a reasonable estimate of the medical and scientific needs of the United States respecting narcotic drugs?"

I would like to ask some gentleman representing the American Drug Manufacturers' Association to open the discussion.

Is the Present System of Analyzing Manufacturers' and Wholesalers' Sales Adequate to Establish a Reasonable Estimate of the Medical and Scientific Needs of the United States Respecting Narcotic Drugs?

Mr. FRAILEY. Mr. Chairman, it has been brought out by Mr. Breidenbach that manufacturers make monthly reports to the Government of their transactions in narcotic drugs. From these reports, which are submitted individually and separately by the respective manufacturers, the Government is able to make a consolidated report. It seems to me, therefore, that some member of the board or the former board, perhaps Mr. Tennyson, might be in a position to speak more intelligently upon this subject and to make suggestions as to how the present system has worked out.

From my observation, based upon the report made by Mr. Breidenbach, the estimate, with the exception of preparing for reserves, has been quite accurate, and I think it would be interesting to have Mr. Tennyson, who was a member of the former board, comment in some detail upon that phase of it.

Mr. TENNYSON. As I stated before, Mr. Chairman, the basis for making determinations of crude opium and coca leaves necessary

for medical and legitimate purposes heretofore has been based largely on the manufacturers' sales, stock on hand, and so forth, as shown by their own reports and our records. In theory, assuming 100 per cent efficiency in the enforcement of the Harrison law, that perhaps is a very good criterion, particularly when you take into consideration the fact that all transfers of narcotics down to the consuming classes must be pursuant to the official order form, and those official order forms may be obtained only by persons who are registered as presumably qualified to deal in narcotics. I think we all recognize that there are diversions down the line, perhaps.

If I might give my personal estimate, largely confined to the dispensing classes, there are some physicians and druggists who will cater to the drug addict. The reports will show that. Of course, in every case where you discover catering to drug addiction, that could hardly be confined to medical needs. Only recently I had occasion to see a report of one of the inspectors who made an investigation of four or five physicians and an equal number of druggists in the city of Atlanta. He had prepared a compilation showing the amount of drugs dispensed to addicts, purely for drug addiction, by those few physicians and druggists in Atlanta. It amounted to nearly 1,000 ounces of morphine over a yearly period. That was nearly 1 per cent of the total sales of the United States. Of course that represents diversion. However, it is very difficult to ascertain the total quantity thus diverted, because even though you make a case against a doctor you may not always obtain the amount that is diverted, that is, the amount which the patient did not require for medical needs. Even then you are treading on dangerous ground in reducing importations of opium by that total amount, because there will always be diversions, and when you arbitrarily cut off that proportion of opium represented by the diversion, to that extent the medical needs of the country are going to suffer. I do not know just exactly how to solve the problem. I think that is one for the conference to take into consideration. If you should consider that under the enforcement of the Harrison law there were absolutely no diversions, perhaps the sales reports of the manufacturers could be taken as a criterion without any scientific inquiry on your part. Frankly, I do not see how it can be done.

Doctor WOODWARD. May I ask Mr. Tennyson if he will tell us how those physicians in Georgia were able for any considerable period of time to get by with any such diversions as he reports? It is quite obvious that if they have been diverting opium in that way for any considerable length of time, that fact should have been discovered by those charged with the enforcement of the law. If you can tell why it was not discovered, I think we will have found the loophole that tends to discredit all these figures that are given us.

Mr. TENNYSON. The only answer that I would make to that is the fact that we have a very limited field force and we can not get around to these people every day or every week. There is a force of less than 300 men for 120,000,000 people, and they have to devote their time to the entire United States. They can not visit every doctor or every druggist every day or every week or every month. They have to perform their duties with the highest degree of efficiency that they can, consistent with their numbers, and with the territory they have to cover. Of course, when we examine our monthly returns and note sales, apparently excessive sales by a given physician, we can determine in those cases whether or not that physician possibly has a very large number of cancer patients, for instance, or whether he is simply catering to drug addiction as such. But that requires a great deal of research, and unfortunately we are hampered in the matter of our departmental forces, as Mr. Breidenbach has pointed out, for the purpose of making these extracts from the returns.

Doctor MCLEAN. Is there any State or local enforcement agency?

Mr. TENNYSON. I do not think the State enforcement agencies give very much attention to the doctor and the druggist classes.

Mr. HILTON. In what year did that diversion occur in Georgia? Can you inform me about what amount, or what percentage has been diverted covering a period of years in the dispensing class, that is the physician and pharmacist?

Mr. TENNYSON. It is rather difficult to arrive at that.

Mr. HILTON. Approximately, I mean.

Mr. TENNYSON. Unfortunately we have not had the time nor the force to prepare statistics showing the total diversions, as I pointed out. It would require an enormous amount of research work and examination of reports, and even then you would not arrive at a correct figure. I can not give you an idea at this time, but I can obtain it for you. It was comparatively recently that it occurred.

Mr. HILTON. Within a period of five years?

Mr. TENNYSON. Oh, yes.

Mr. ANSLINGER. I might make some comment on that situation. We find it all over the United States, I believe. It is spotty, depending on conditions. For instance, at Atlanta there is the Federal penitentiary. Perhaps one-fifth of the prisoners there are addicts. As I understand the situation, as they are let out they settle in the vicinity of Atlanta and find their peddlers. The Federal Government has stepped in and cleaned up the situation as to peddlers. Then they followed the line of least resistance and went into diversions from legitimate channels. We have cleaned that up, and we may have the peddler to contend with again. It seems to be a see-saw proposition, depending on conditions, of course. It is some-

thing that has to be watched throughout the country, depending on the locality.

Mr. SWAIN. Mr. Tennyson, if I understood you correctly, you said that in your judgment a great deal of the narcotic drugs that were illegally used has been diverted through the producing and dispensing classes. My reaction to that statement is that it is totally at variance with what I have always understood was supported by official information. I have always understood, basing my understanding upon information given out by the United States Government or its employees, that the amount of violations of the Harrison Antinarcotic Act on the part of those lawfully qualified, had almost been reduced to a negligible quantity. Your statement does not bear that out, does it?

Mr. TENNYSON. I was speaking of the amount of diversions of narcotic drugs which we might call those coming into legitimate channels.

Mr. SWAIN. Into legitimate channels?

Mr. TENNYSON. Yes.

Mr. SWAIN. That is not what you mean by diversion, is it, Surgeon General? Do you not refer to diversions to illegal uses?

The SURGEON GENERAL. No.

Mr. TENNYSON. I mean by that the quantity of narcotic drugs which comes from the manufacturers down the line to registered dealers, and is diverted at some point to drug addiction.

Mr. SWAIN. That is exactly what I understand.

Mr. TENNYSON. Of course, we maintained and still maintain that the majority of narcotic drugs which go to drug addiction are smuggled. That is our primary problem; but, in discussing diversions and the point at which they occur, there are some diversions which, in my opinion, come from the dispensing classes.

Mr. SWAIN. Then I think I owe you an apology. When you used the term "diversion" you were going from the class 1 registrant down to class 5?

Mr. TENNYSON. Yes.

Mr. SWAIN. I do want to say a word in the discussion at this point, however. I want to read into the discussion a quotation from Doctor Treadway's article appearing in the Public Health Reports of March 14, 1930, as follows:

During the four months' period beginning July 1, 1929, and ending October 31, 1929, 2,407 were reported as violators of the antinarcotic laws. Of this number 2,040 were formally arrested and 367 were placed under surveillance of one kind or another. Of the 2,040 persons formally arrested, 1,996 were unregistered persons under the Harrison narcotic law and 44 were registered, including physicians, dentists, pharmacists, veterinary surgeons, and others. Of the 367 placed under surveillance, 162 were unregistered and 205 were registered under the Harrison Narcotic Act.

Multiplying these figures by 3 we get the yearly period, assuming that 4 months is representative of the 12 months' period.

We have from the official record the statement that less than 125 violations occurred in the registered classes during the entire year. Certainly that would not appear to give support to any statement that a large proportion of the amount illegally diverted was from that class.

Mr. Devine, in an article in the United States Daily of June 3, 1930, said that the principal source of supply of so-called nonmedical addicts is that represented by narcotic drugs unlawfully introduced into this country by foreign countries, principally those of Europe.

My only reason for intruding at this point is to say that I do not feel that any unqualified statement that a large proportion of the drugs illegally diverted comes from the dispensing classes should stand. If that statement is made, I think it should be made with a full statement as to its exact and specific meaning. Otherwise, I think it will do a great deal of harm.

The SURGEON GENERAL. I will ask Dr. William Gerry Morgan, president of the American Medical Association, if he has anything to say.

Doctor MORGAN. I feel that the statement which has just been made is an important one, because the public is coming to have a rather unfavorable opinion of physicians and perhaps some druggists, not only in the matter of dispensing narcotics but on the question of dispensing medicinal alcohol, and it seems only fair that such a statement as the speaker has just made should be given some publicity. It seems to me that neither the druggists nor the physicians are the chief malefactors in either regard. As I say, that statement should be given enough publicity so that the public can come to judge fairly of the situation as it actually exists. We physicians, and I am sure the druggists likewise are willing to and want to bear our just responsibility in this regard, and in regard to the dispensing of medicinal alcohol.

Mr. HUNSBERGER. I wonder whether we can not extend the speaker's statement with reference to the dispensing classes. You differentiate in the various classes between 1, 2, 3, 4, and 5, do you not?

Mr. TENNYSON. Yes.

Mr. HUNSBERGER. By "dispensing classes" you mean what particular classes?

Mr. TENNYSON. Classes 3, 4, and 5.

Mr. HUNSBERGER. And eliminate from consideration classes 1 and 2?

Mr. TENNYSON. Yes.

Mr. HUNSBERGER. I think the point that the speaker wanted to make was that such diversions as did occur of legally withdrawn narcotic drugs did not occur in classes 1 and 2, but through classes 3, 4, and 5. Is that correct?

Mr. TENNYSON. Yes.

Mr. HUNSBERGER. And has no relationship at all to smuggled drugs, and has no relationship to the total quantity of drugs illegally used?

Mr. TENNYSON. Oh, no.

Mr. HUNSBERGER. I do not think we are all clear on that. As far as the Atlanta case is concerned, if I may be specific, it does seem to me, without being altogether familiar with the statistics set up from the sales reports, and having knowledge based only on experience of narcotic drugs withdrawn by the average pharmacist, that when the sales records began to indicate that a man had drawn 200 ounces of morphine in a year it was time for somebody to begin to take notice to see what had happened at that particular drug store. That, of course, would apply to the dispensing physician, because, I may say, 200 ounces of morphine used in one year is probably one hundred times as much as the average prescription druggist would be likely to use.

The SURGEON GENERAL. The question which we had before us is this: "Is the present system of analyzing manufacturers' and wholesalers' sales adequate to establish a reasonable estimate of the medical and scientific needs of the United States respecting narcotic drugs?"

Is there any further discussion on this topic?

Mr. BREIDENBACH. In connection with this question may I call attention to my prior statement that we have no way of analyzing the sales made by wholesale dealers. We have no statistics on that. We have no sales reported to us. The returns simply show the packages and the preparation that is contained in the packages. We have no classification or no computation which will serve as a convenient basis, I should say, for computing or compiling statistics from those wholesale returns. Our system of analyzing the returns of sales and distributions refers and relates only to manufacturers' returns. I would like to have the opinion of anyone who may be present representing the wholesale dealers, as to what the attitude of those wholesale dealers would be as to reporting more complete information in that respect, so that we could determine from those reports for each month the quantities of the various kinds of narcotics sold, and the classes of registrants to whom they are sold, that is, segregated in classes 3, 4, and 5; then at the end of the year we could determine how much of the year's consumption was dispensed

by the retail drug store, how much by the licensed practitioners, and how much went to the manufacturers of exempt preparations. I should be glad to hear any suggestions that anyone has on that.

The SURGEON GENERAL. We would like to hear from the manufacturers. Doctor Treadway, have you any suggestion?

Doctor TREADWAY. Gentlemen, I think this is a very important question from the standpoint of the Public Health Service. At the present time the quantity of imports is based on an analysis of manufacturers' sales. That represents the quantities necessary for the dispensing groups, Nos. 3, 4, and 5, and, for purposes of argument, we can say that classes 3, 4, and 5 have indispensable uses for narcotic drugs. A certain unknown quantity is probably used inadvisedly and a certain unknown quantity is probably diverted to illegitimate channels. If we say that our imports represent 100 units for the use of this dispensing class, and we say for purposes of argument that 60 units go to the indispensable use, 35 units go to the ill-advised use, and five units go to diverted uses, then we have determined exactly the medical needs as I see it. On the other hand, if we say that our medical needs represent only the indispensable, namely, the 60 units, we will still have a certain proportion diverted to illegitimate channels and a certain proportion to ill-advised use. If it is not satisfactory to analyze the manufacturers' sales as a basis for determining the dispensing class needs, the Public Health Service need not make these special studies. On the other hand, if something is to be gained by making a study of the uses by the dispensing classes, we would like to have an expression of your opinion about it.

Doctor CUSTIS. I should like to know what is going to be put down as "ill-advised use" and how that is going to be determined. What would be "ill-advised use of narcotics," and what should be regular use? Of course, we know that ill-advised use would be a use by somebody who dispensed the drug honestly for something that might better be treated some other way. How are you going to regulate that?

Doctor TREADWAY. The only method of regulating that is by means of an educational program.

Doctor CUSTIS. It could not be done by regulation?

Doctor TREADWAY. It could not be done by law, no.

Doctor CUSTIS. That is the point. It is almost impossible to solve that question as long as there are as many different physicians as there are to-day. You have to group your indispensable use and your ill-advised use, honest ill-advised use, under the same heading and consider only the actually dishonest diversions as illegitimate use, because doctors always have differed and always will differ on what is the advised use of any drug.

Doctor WOODWARD. There is some reference here to the present system of analyzing manufacturers' and wholesalers' sales. It appears from what has been said here this morning that the coca leaves and opium imported are assayed at the Customs Bureau, so that the Treasury Department, in theory at least, knows the amount of alkaloids that should be derived from a given quantity of the crude drug. I wondered, however, just what the processes were within the manufacturers' establishments of preventing diversions by employees who handled the drugs in the process of manufacture. We know, for instance, that even at the mints there must be a careful check-up on all the gold that comes in and all the gold that goes out. The same is true at the Bureau of Engraving and Printing. The same is true at every place where alcohol is produced. In other words, there is no reflection on the employee. There is no reflection on the proprietor in the present case; but I believe it would be interesting to know just how that is controlled.

Then, with regard to manufacturers' sales, reference has been made to the enormous quantity of alkaloids and possibly crude opium, that goes into exempt preparations. I would like to know whether the exempt preparations are ever assayed to determine whether there might not be some diversions in reports of the amount that is used for that purpose. You report that a given compound contains, we will say, 1⅞ grains of opium per ounce, and if a man actually puts into that 1⅜ grains, he has a margin of one-half grain. The same principle will apply, of course, to all manufacturers of the exempt preparations. Unless those drugs are systematically assayed there is a loophole there over which the Government has no control.

With respect to the figures that can be gotten from an examination of the records of those who dispense these drugs, it has been said that the Government has no record of the quantity of these drugs in the hands of dispensers. I think that is correct. Yet, if I am not mistaken, at least up to a few years ago every dispenser who procured a renewal of his license was required to send in an inventory. Is that not correct?

Mr. TENNYSON. That is correct.

Doctor CUSTIS. Then the trouble lies not in the method but in the inadequacy of the machinery in the Government service to make a proper study and analysis. I have a very distinct impression that you are not going to solve this problem by trying to solve it as a whole. This is too big a problem for that. I think the commissioner of narcotics has pointed out the key to the whole situation when he compares the situation in Atlanta with the situation in other communities. If the narcotic agents in charge of the enforce-

ment of the law in the various parts of the country will familiarize themselves with the quantities of narcotics that are used from month to month, and from year to year, by the different classes of registrants, they will form a very good idea as to who is using excessive amounts. It will not take a very large amount of study and observation and inquiry to learn whether those persons are probably using large amounts in good faith, or whether they are diverting it intentionally. I am under the impression that you will find quite a difference in the quantity of narcotic drugs used in different sections of the country, in perfect good faith, depending on the character of the local population, and on the instructions and the habits of the physicians. It would not be fair to say to a man in one section of the country that he was using a drug unnecessarily, because a physician in another section of the country was not using so much. We refer to the scientific study of the dispensing methods, and we refer to legitimate channels. As a matter of fact, the administration of narcotic drugs, as I see it, is not strictly a scientific matter unless you are going to take psychology into consideration. It is a matter of good faith on the part of those men who are handling the drugs and those who are administering the drugs. If they are honest men, their judgment is the best judgment that can be obtained. They know the patient; they know the circumstances; they dispense the drugs on that basis. If an outsider came in and said that because Doctor Jones prescribes more than Doctor Smith for a given case, Doctor Jones is a narcotic peddler, I believe that would be hardly rational. You have to know your patient. I think you can not measure the good faith of the physician by putting someone else over him who has never seen the case and knows nothing of the patient. I believe you will come nearer solving the needs of the country by a careful study of the returns that are now actually being made by physicians and others to the local narcotic officers.

I would like to suggest that in connection with the study of class 4 records it be differentiated so as to show the amount used by physicians, dentists, veterinarians, osteopaths, and chiropractors, because in some States these latter groups do use it. These figures have never been available. I suppose you will get some worthwhile results if you will check up and determine the proportion of registrants in each of the different States in comparison with the number of licensed physicians there and the number of licensed veterinarians, and licensed osteopaths. I am quite sure that the methods of registering have not been uniform, because of differences in State laws and in the views of the local narcotic administration officers.

The SURGEON GENERAL. Is there any further discussion?

Doctor BOYLSTON. I think I may be qualified to answer Doctor Woodward's first question as to control within the manufacturing plant, because I have had 20 years' experience in doing it. These things, you realize, are very valuable. They are more valuable than silver and about as valuable as gold. In the case of opium, every particular ball of opium is sampled. A composite sample is taken from that and we make allowance for evaporation of water, based on experience over a number of years. This sample has six assays, three by each of two experienced chemists. The yield of narcotics is checked up against the assay, multiplied by the weight of the opium, and that must balance very, very closely, within a small fraction of 1 per cent, at the end of the run. Does that answer your question as to control, Doctor?

Doctor WOODWARD. Yes.

The SURGEON GENERAL. Is there any further discussion?

Mr. BREIDENBACH. In answering Doctor Woodward's question as to the compilation of statistics, determining the quantities on hand in the dispensing classes, in which he made reference to the inventories furnished annually, I would like to call attention to the fact that the regulations have provided, for the convenience of the dispensing classes, that that inventory may be furnished as of any date between December 31 and the 1st of July following. Some registrants, of course, will give it as of one date and some as of another date. It is totally unsatisfactory for the compilation of statistics, because they are not on any common single date. The purpose is to give a starting point in the case of a check-up so as to know what is on hand as of any given date for a single given registrant with the addition of his order forms and his record of sales. I think you will recall, and I think the record will bear me out, that in my first statement I said we had a system which was fairly satisfactory in individual cases, for control purposes, but was totally inadequate for statistical purposes, to determine quantities on hand in a single group as a whole at any given time. We can not give statistics of quantities on hand and quantities sold by class 4 registrants as a group, much less divide class 4 among the different individuals.

Doctor WOODWARD. I would suggest that where you are dealing with 80,000 registrants in class 4, with the variations in the amount the registrant has on hand on a given day in the six months' period, either one way or the other, it will average up pretty well for the entire group as of any date. There is no likelihood of there being biased statistics when you are dealing with that number, and there is no motive to bias them.

Doctor TAYLOR. I want to reply a little further to a question Doctor Woodward raised regarding the control of narcotic materials in the course of manufacture. These manufacturers are not quite in the same position as the producers of morphine and atropin. They have, however, in common with the other pharmaceutical manufacturers, used opium for such purposes; for example, in making camphorated tincture of opium, which doubtless is one of the things Doctor Woodward has in mind in his questions. Not only would the opium itself, as received, be assayed after a very careful sampling of the same character as just mentioned by Mr. Boylston, but there would be a number of checks signed by every individual having anything to do with the different stages of the process of manufacture, and a final chemical assay would be made for the narcotic content of the finished preparation. I would say, for the benefit of those who may not be fully familiar with the difficulties of chemical analysis, that camphorated tincture of opium is one of the most difficult things I know of on which to get thoroughly accurate results. In common with the other pharmaceutical manufacturers, we have paid a great deal of attention to that.

In the case, for example, of the use of morphine and its salts, or cocaine and its salts, the same process will be followed in checking accurately all materials received and all materials used, and in the assay of the finished preparations. There must be no material discrepancy between the materials that have been received upon narcotic orders and those which go out on narcotic orders, on our own records.

I would also like to point out that there is a check on these materials held by the United States Government itself. The drug control laboratories are charged with the responsibility of determining the character and accuracy of the medicinal products on the market, which they have been carrying out with much care and thought; so that there is a still further, entirely independent check of the medicinal substances that go out, which can be tied up with the records of individual manufacturers and those of the narcotic division.

The SURGEON GENERAL. Is there any further discussion?

Mr. CALDWELL. I would like to say, in regard to this question, based upon my five years' work with Federal narcotic control, that it seems to me that one thing that has to be determined is what is meant by the medical and scientific needs of the United States. The commissioner, who now has to carry on, must decide, under this act, what his interpretation of that is to be. If you consider that the requirements of the United States for medical and scientific purposes are the amounts used properly for those purposes, less the diversion, which we know occurs, then you should proceed to de-

termine what the diversion is, and subtract that from the amount which is now given out, and you will have left, as Doctor Treadway says, the 60 per cent. That is just an estimate. I do not know what it will be. No one knows. Then you proceed to limit the manufacture to 60 per cent of what they get now. Unless you make some change in the law, or the enforcement of the law, your legitimate prescriptions will get only a certain part of what they should get. They will be starved in order that this diversion may continue. A certain percentage of their 60 per cent will naturally be diverted, and you go on, leaving your medical, dental, and veterinary professions with only a part of what they require. That is the point I wish to make. We have been faced with that problem during the years the control board has been considering this matter.

The SURGEON GENERAL. Is there any further discussion, Doctor White?

Doctor WHITE. I would like to say, Mr. Chairman, that I have been impressed during this conference with the excellent spirit of cooperation between the bureaus of the Government and the various groups represented here. The whole spirit of this meeting has been one of cooperation and kindly spirit. Probably the whole of the United States is represented here, if you take the physician with his clientele as a unit, and the veterinarian with his unit, and the manufacturers who prepare what the physician uses.

It is obvious that we have not enough knowledge in connection with this problem. If we took the individual opinions in this room we would probably have almost as many opinions as there are organizations represented here.

It is obvious, too, from what Mr. Tennyson has said, that there is knowledge available, if it were properly analyzed, that would give us a lead, at least, toward the better operation of the law which Congress has passed.

The SURGEON GENERAL. I think Doctor Treadway would like to get an expression of opinion in answer to the question, "Is the present system of analyzing manufacturers' and wholesalers' sales adequate to establish a reasonable estimate of the medical and scientific needs of the United States respecting narcotic drugs?" We have had some opinions expressed on this subject. It is a very definite question and a very fundamental one. Is there any further discussion of this particular question?

We go on to the program for the afternoon session. The first topic is "Methods of Study and Investigation: 1. Principles Involved in Previous Studies and Investigations Respecting Medicinal and Scientific Needs."

There have been several surveys along this line. There was one made by the health section of the League of Nations; one made by

the Public Health Service; and one by the Bureau of Social Hygiene. I am going to ask Mr. Caldwell, of the Department of State, if he will be good enough to open this discussion.

Principles Involved in Previous Studies and Investigations Respecting Medical and Scientific Needs

Mr. CALDWELL. Mr. Chairman and gentlemen, I shall not take up very much of your time in regard to the League of Nations survey, because there has never been anything which could properly be described as a league survey. In opening, I want to refer to the fact that a study of this problem is of interest to other governments, and their studies are of interest to us, and consequently to the Department of State. This whole problem is an international problem, and has been so recognized from the beginning.

In regard to the league survey, the Hague convention required that governments limit their manufacture to the amount needed for medical and legitimate purposes, but it did not specify any means of determining that amount. As a matter of fact, up to the present time no government has made any very deep study in an effort to arrive at it. As you know from what has been said this morning, the Federal Narcotic Control Board has done its best with the figures it had, but no special study has been made. When the Geneva conference was called, preparations were made for a special study beginning in 1921, but the league, not having any commission which could be sent to various countries to make a uniform study, simply called on various countries for information on the basis of a questionnaire. Each government answered in itst own way; some did not answer at all; some made an effort to get the figures. In some cases they were based upon studies of hospitals and health insurance societies. In other cases they were based upon such figures as we have used ourselves, simply using the formula of importations plus the manufacture, minus exports, and taking no account of diversions. The result was a very inadequate amount of information which the conference had available in 1924 and 1925.

Last September the League Council again called a conference to limit the manufacture of narcotic drugs, and preparations are being made for that.

In order to limit these drugs to the amount required for medical purposes, the amount must be determined, and that is, of course, their first problem, with which they have not made much headway. The health committee of the league studied all the figures available and compiled them in a very interesting document, which gives a great deal of information, but by no means adequate information. A specialist from that health committee gave an explanation of

the figures and his comments on them, and discussed the various ways in which they were arrived at. No country has made any very thorough study of this which would be of much interest to you. They simply took the figures based upon that formula. In the case of the United States it was simply production in the United States less exports, because we do not import. In other countries it was importation plus production, minus exports. In others there were estimates based upon studies that have been made of representative hospitals and health insurance societies. There is really nothing very detailed or of any great value which I could give you in regard to the methods which have been followed.

The SURGEON GENERAL. Dr. G. W. McCoy, director of the National Institute of Health, Public Health Service, is here this morning. I am going to ask Doctor McCoy to tell us something about the Public Health Service surveys. My idea is to analyze all these problems before us, and I am going to ask your opinion about them later. I think it is better to get the whole picture before us first.

Doctor McCOY. Mr. Chairman, and gentlemen of the conference, we have no special apologies to make for the Public Health Service survey, if it is considered strictly within the limits within which we work. About six years ago Doctor DuMez made a survey of the narcotic requirements of what he conceived to be a reasonably average, typical county in the United States. After a good bit of discussion the county selected was Allegany County, in western Maryland. This was selected because it had a population with about the same distribution between rural and urban as there is in the country in general. It had several hospitals in it. It was so remote from the seaboard that the question of smuggling did not make any very great difference.

The method was to make a personal canvass of every registrant in every class in that territory. The population amounted to approximately 70,000. I am going to use round numbers throughout.

I may say that the results of this study included the so-called exempt preparations which constituted about 4 per cent of the requirements for opium. Doctor DuMez's survey showed that, in round numbers, there were required per annum for each person in the population, about 7 grains of opium, in terms of 10 per cent morphine content, and about 29 grains of codeine, containing the content of cocaine usually found.

There is one thing that no estimate was made of, and which we did not attempt to consider, but it is very important, and I am sure the Congress will have to consider it seriously. That is the question of reserves for emergency. We have heard this morning of the

steps taken by the Army and Navy to build up reserves for emergencies at times when importation might be completely cut off. So far as I know, no provision has been made for a similar emergency as affecting the civilian population. So, as I see it, the figure of 7 grains of opium and 29 grains of cocaine is to be considered as merely the routine requirements without any thought of a supply being built up to meet such an emergency as war.

The SURGEON GENERAL. An extensive survey was carried on by the Bureau of Social Hygiene. I understand the Rockefeller Foundation financed it. I was going to ask Doctor Terry to tell us about it, but he does not seem to be here. This subject is listed on the program for discussion this afternoon.

There is a great deal more on the program for this afternoon than we could possibly complete, so we will take up the next topic, which is, "The advisability of analyzing the records of general and special hospitals or institutions with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels of narcotic drugs as a basis for determining the normal medicinal and scientific requirements, and what official and unofficial agencies may be expected to furnish these data."

I would like to have some expression of opinion regarding this topic. I think Doctor MCLEAN, representing the American Hospital Association, might very well open the discussion if he will be good enough to do so.

The Advisability of Analyzing the Records of General and Special Hospitals or Institutions With Reference to the Indispensable Uses, Ill-Advised Uses, and Diversions From Legitimate Channels, of Narcotic Drugs as a Basis for Determining the Normal Medicinal and Scientific Requirements, and What Official and Unofficial Agencies May Be Expected to Furnish These Data

Doctor MCLEAN. Mr. Chairman and members of the conference, we have now arrived in this discussion at the place where these drugs are actually used. So far we have been dispensing them; now we are ready to use them.

I am not going to discuss the scientific needs, because I know nothing about them; but the medical needs can probably be established by a survey of a representative hospital. I have gone to the trouble, within the last few days, of getting some information in reference to a hospital that is probably as representative as any in the United States. The hospital I am talking about is the Philadelphia General Hospital. That hospital has approximately 20,000 patients each year. For the last 10 years they have had anywhere from 18,000 to 21,000 patients per year in the hospital. Those patients have stayed there, on the average, about 30 days, and each

one of those patients, based on the amount of morphine that was purchased and dispensed through the hospital drug store, which is the only place you can get morphine in the Philadelphia General Hospital, during the year 1927, used 1.85 grains of morphine. In 1928 he used 1.5, and in 1929 he used 1.3 grains. We have found in the Philadelphia General Hospital that there is a slight tendency toward a decrease in the use of morphine, but there has been a great increase in the amount of codeine used. In 1929 each of the 20,000 patients used 7.5 grains of codeine. In 1928 he used 6 grains of codeine.

I do not know why each one of those 20,000 patients used 1 grain of cocaine in 30 days, unless the establishment of a rather large and expensive cancer service would have something to do with it. That I do not know, but it is at least worth an investigation. These figures mean that 20,000 patients used 20,000 grains of cocaine during that time.

Now let us consider a special hospital, where the supervision of these drugs has been very careful. Taking a small tuberculosis hospital, which had 793 patients in it during the year 1929, we found that each one of those patients received one-eightieth of a grain of morphine each day, and that each patient received one-tenth of a grain of codeine each day. I personally know that there was no illegitimate use of any of the narcotic drugs in that hospital.

Let us go back for a moment to the Philadelphia General Hospital and see whether there was a close supervision of their narcotic drugs. All drugs, as I said before, come in through the druggist. The interne writes the prescriptions for narcotic drugs. That must be approved by one of the assistant chief resident physicians or the chief resident physician himself. The nurse is the only person who can get that narcotic prescription filled. A narcotic prescription sent by a messanger to the drug store will not be filled. So, therefore, I do not believe that there is much chance of the illegitimate use of any narcotic drugs in the Philadelphia General Hospital. As I say, I am using that as an illustration of a hospital that might well be located in any part of the United States.

I am going to speak for just a moment in reference to the practicing physician. I happen to be one myself. I am going to give you one illustration. I used an excessive quantity of narcotic drugs about four years ago for a patient suffering with Von Recklinghausen's disease. Some of you may not know what that is. It is the only case I have ever seen and I hope I may never see another. I hope, if I get it myself, that the doctor will give me more morphine and opium, in any form, than I gave that girl. The patient was 28 years of age, suffering with Von Recklinghausen's disease, with mul-

tiple tumors on the nerves. It is a neuro-fibroma. She had "bunches of grapes," for instance, all over her body, as well as inside her body. Before I saw this patient an operation had been performed on her, because the obstructions in certain portions of the leg were so great that gangrene was feared, and her leg amputated. In the stump of that leg she developed this enormous mass of very painful tumors. Therefore I gave her hypodermics, morphine, and opium suppositories, until at last I was called to account by the bureau of drug control in my own State. They said, "Just why, Doctor, are you using so much narcotics for this particular young woman?" This was notwithstanding the fact that I had already reported that I was using them, and what I was using them for. They felt that the amount was excessive, and I was very glad to find that the bureau of drug control checked me up. I am only one of the many doctors in our State who are checked up by our bureau of drug control. We do have illegitimate prescribers of narcotic drugs in Pennsylvania—not very many, however. Of those that we have had in years gone by, at least two spent a number of years down at Atlanta.

So I feel, therefore, as one of the speakers said a few moments ago, that a proper supervision of the records that are on file in Washington and in Harrisburg—using my own State of Pennsylvania as an illustration—would give us complete enough information to come to a very definite conclusion as to the amount of narcotics that should be used in this country.

If I might suggest a plan, three or four hospitals in different sections of the country should be used, because the demands may differ.

To use the Philadelphia General Hospital, as an example, as a basis of computation, we should begin by asking whether these amounts shown on the reports furnished to me are the amounts that those patients ought to receive? Investigate the Philadelphia General Hospital and find out whether they are the amounts that ought to be used. There are other hospitals, say in Boston, Chicago, or San Francisco, of similar type, where these investigations could also be carried on.

The investigation of the practicing physician is probably a very difficult problem. How might that be done? On the staff of the Philadelphia General Hospital we have between 140 and 150 physicians. In the bureau of hospitals in our city we have the responsibility for about 12,000 beds in different organizations, such as the Philadelphia General Hospital, our municipal hospital, our almshouse, and so forth. There is an enormous organization that might be investigated, with all the medical personnel connected with it. I should say that 90 per cent of the medical personnel are practicing

physicians who go into the homes. They could very easily and very readily be asked to give definite information as to what they think should be the needs and the requirements of the practicing physician.

The SURGEON GENERAL. Is there any further discussion?

Doctor BOYLSTON. If it is pertinent at this point, and if we have the time, I should like to ask to have several physicians here express their opinion as to whether an investigation of the sort contemplated would have to be almost a perpetual investigation, whether or not the ideas of physicians are constantly changing; to ask, for example, whether, during the last few years our American physicians have come to feel that a respiratory sedative in case of a severe cough may prevent roughening of the lungs and the development of pneumonia later; and whether they are gradually recognizing the fact that codeine is comparatively innocuous, and a nonhabit-forming drug, as compared with morphine. We find the sales of morphine going down and the sales of codeine going up. I think almost everyone who has anything to do with this work agrees that codeine is not used by addicts. It requires too big a dose. It does not have the kick. It takes six times as much opium to make a dose of codeine as it does a dose of morphine. The pharmacologist could give us authentic figures on the comparative therapeutic doses of codeine and morphine, but is it not true that the ideas of physicians change from year to year, and is it not true that the use of codeine is increasing? This must be taken into account in such a survey, and it might well change in the next two or three years. Perhaps some physician here could enlighten us on that.

Doctor MCLEAN. Mr. Chairman, may I answer that question? There is no question that the medical profession of this country, with the enormous number of respiratory diseases we are now having, especially as an aftermath of influenza attacks, is using very much more codeine. I think those of us who use it to any great degree—and I use it rather extensively—feel that there is a possibility that we could lessen the use of morphine if codeine were taken out of the Harrison Act and not restricted. I think we can safely say that codeine is not a habit-producing drug. I have never seen evidences of it. I have been watching addicts for more than 30 years, and that is long enough to come to some definite conclusion. I have said repeatedly to my patients when I give them codeine that there is one unfavorable result that is very distressing: It is very constipating. That is the only unfavorable result that I have ever found with codeine. The men who are dealing with respiratory diseases are using codeine to a greater degree than ever before, and I feel that the use of codeine is going to increase.

The SURGEON GENERAL. Is there any further discussion?

Captain BELL. I do not think there is any question that there are fashions in medication as in other things, with the possible exception of the stable drugs.

It is rather interesting, perhaps, at this point, to indicate that in the last five years in the Navy, for instance, we have had a total of 8 cases of addiction prior to admission, and 33 cases attributable to cocaine and morphine, with no codeine cases. There was one case diagnosed as psychosis-intoxication, drugs. Perhaps, as a record for five years, that is a sufficient indication, but I do not think you could dignify the diversion of drugs in the service, with the safeguards with which narcotics are surrounded, by the term "diversion." It constitutes leakage, and nothing else. Even that is doubtful, because the probabilities are that these cases were cases in which the drug was acquired outside the service.

Addicts are turning to other things, because they are finding it difficult to get the true narcotics.

Doctor HUNT. There is one point about morphine and codeine which I think is pretty well established by clinical observation and experimental work. That is that it seems impossible to develop a tolerance or habit by the administration of codeine, but there is a curious cross tolerance. The individual who has been made tolerant to morphine is tolerant to codeine. However, I thoroughly sympathize with Doctor McLean's plea that there should be as few restrictions as possible with respect to codeine. That is my present impression.

Doctor WOODWARD. It would be unfortunate if we let the meeting adjourn this morning with the impression that there was no such thing as a codeine addict. I have never seen one, but the Ohio State Medical Association a few years ago sent out questionnaires to reputable physicians in the State following various lines of practice, and there were some definite returns of persons who had seen codeine addicts. The testimony of one man that he has seen a codeine addict is very much more valuable than the testimony of a thousand men that they never saw one. One man who saw a murder is a much more competent witness than a thousand men who did not see it.

Doctor HUNT. The point is: How did those few codeine addicts acquire the addiction? The cases investigated, so far as I can learn, always show that they started with morphine.

The SURGEON GENERAL. Is there any further discussion? I take it that it is the sense, at least, of those who expressed their opinion, that an analysis of the records of general and special hospitals or institutions would be one basis for determining the normal requirement, which is the question we asked.

I want again to emphasize the fact that the Public Health Service and the Bureau of Narcotics are asking your advice to-day about this problem. It is something we are required to do by law, and we want to get all the light possible on these problems.

A recess was taken at 12.40 p. m. until 2 o'clock p. m.

Afternoon Session

The conference was resumed at 2.15 o'clock p. m.

The SURGEON GENERAL. When we recessed for lunch we had just finished the question of the advisability of anlyzing hospital records. In the meantime, on the question of previous studies and investigations, the Bureau of Social Hygiene has not been represented. Dr. C. E. Terry is here now.

Doctor Terry, we will ask you this afternoon to tell us something of your studies.

Doctor TERRY. Unfortunately, I was not present to hear Doctor McCoy this morning when he spoke of the detailed study of the legal use of narcotics which the Public Health Service made in 1924 in Allegany County, Md.

In the same year it was suggested that the committee on drug addictions make similar studies in other localities in order that a greater territory and population might be covered. I think the Public Health Service could only make that one study at the time as the figures were needed for the opium conference called by the League of Nations for the fall of that year.

As a result, with the cooperation and approval of the Public Health Service and of the Bureau of Internal Revenue, the committee undertook studies in six communities. We had no basis on which to select those communities. We did not know what a typical community in opium and coca leaf use might be.

We selected widely separated communities, including urban and rural populations and of about the same total population, namely, about 100,000. The total population for our six communities was a little over 600,000. The communities chosen were Elmira, N. Y.; Montgomery, Ala.; Sioux City, Iowa; El Paso, Tex.; Tacoma, Wash.; and Gary, Ind.

The technique employed in making those studies was the use of the record-keeping machinery of the Harrison Antinarcotic Act—that is, the records required to be kept by physicians, pharmacists, etc. The object to be ascertained was the amounts of opium and coca leaf delivered to the ultimate consumer, supposedly the patient.

We went over the drug-store records, physicians' records, hospitals' records, all of them, in every one of those communities. We

did them all at the same time with six physicians doing the field work.

We found when they had finished—in fact, before we started, we knew—that the hospital distribution in these communities probably could not be typical of the hospital distribution in the country as a whole.

So, while we were making the above studies, we queried all the hospitals and allied institutions throughout the country for the amount of these drugs used by them during the 12 months' period beginning July 1, 1923, and ending June 30, 1924, and we obtained an average per capita hospital figure, which we called the applied hospital figure. We also got the actual hospital figure in the communities, but we preferred to use the applied hospital figure obtained from the questionnaire, believing that it represented more truly the hospital use throughout the country as a whole.

When the figures were in, the per capita figure for opium varied from 3.5 grams in one community to 17 grams and a fraction in another community. Other figures were 6, 7, and 5. One other per capita figure, I believe, was 13 or 14 grains.

Now, it developed that in the two high communities—Montgomery, Ala., and Elmira, N. Y.—there were arrangements between the local medical societies and the internal-revenue agents which permitted certain physicians, selected by the medical societies, to attend and prescribe for addicts. Thus, in those two communities the prescriptions for opium in its various forms written for addicts were obtained and the amounts legally supplied and used by addicts in those communities were known. In the other four communities it was not known, as there were no such provisions, and addicts presumably got their supplies from illicit sources. It was safe to assume that if the addict figure was the same in all communities, they must have gotten the drug from illicit sources in the other four communities. That is why those two figures were so much higher than the other four.

We did not dare to take those six figures and average them for application to continental United States. There was too much variation in them. We did, however, apply each figure and the resulting figure of opium needed for continental United States on the basis of those figures varied from about 60,000 pounds to, I think, over 200,000 pounds. I forget the exact figures, but it was a very wide variation. The figures, as such, were sent over to the league. I do not remember the coca leaf figures. They are not of particular interest at this time, anyway.

As a result of those very wide variations, we decided to make further studies in the same communities. I stated a moment ago some reasons why they varied. Another reason was that two of

the communities are medical centers, for eye, ear, nose, and throat, and tuberculosis; and cough medicines, containing narcotics, were used in large quantities.

We had about six weeks' time in each community. We analyzed those figures in considerable detail. We analyzed the variations and why they occurred and they have been published in the reports of this committee on these communities.

However, in view of the relatively small population involved, 600,000, the committee decided that a study should be made of a larger, more metropolitan community than was represented in any study in 1924, and in 1926 it undertook a study of Detroit, Mich., and environs. The population covered there was 1,625,000. Detroit and its immediate environs are isolated from other large communities, and it was quite reasonable to suppose that the drug trade radius of Detroit was limited to the immediate vicinity of Detroit, and that within this radius Detroit supplied all the drugs used by the distributors.

In the first study of the first communities, the only information we obtained—the studies, as I said before, were made in a hurry—was the prescription number, date of the prescription, the name and amount of the narcotic drug, and the sales of exempt preparations from doctors, hospitals, and analogous institutions. In Detroit, however, we decided to get other information. We took in the adjuvant drugs. We had the total number of prescriptions, the doses given of the adjuvant drugs, etc., together with the name of the physician, the date and number of the prescription. The end figure, or the per capita figure, as part of that study for Detroit, was about 9 grains per capita for opium.

There arose a question as to whether or not we had, from all of the studies, a figure which it would be safe to apply to continental United States as a whole, and it is a point upon which there are things to be said on both sides.

In Detroit I think that we had represented among the physicians practically every medical school in the country, and we had most of the medical schools represented in the six small communities that we used previously; so that the medical training and experience involved which led to the use of these drugs was presumably typical of the country as a whole.

All the studies were made in nonepidemic years. There were no unusual epidemics nor unusual causes occurring during those years in those localities, and it is my personal belief that medicine is practiced about the same all over the United States. It would seem almost necessarily so.

I believe that a figure based on a population of 2,200,000—roughly 2 per cent of the entire population of continental United

States—can be applied with considerable accuracy to the entire country; certainly at the present time it is the best basis that I know of for determining an importation figure. Any error in the resulting figures from those studies is an under error; in other words, we could not examine records that were not there. We could miss recording records destroyed by fire, in the hands of courts, or lost, and we could miss counter sales in exempt preparations where no records were kept. In every study we made I think we could safely say not 5 per cent of the druggists made any pretense of keeping an accurate record of exempts. We had to go to the local wholesalers to determine the accuracy of the retailers' records of exempt preparations and check one against the other, and they scarcely ever agreed. We usually ended by taking the wholesalers' figures, because there was the book for the year showing the record of sales to John Smith, for instance. Thus the per capita figure that we obtained could not be too large; it conceivably might be too small.

In determining that per capita figure and its value as a basis for estimating the country's needs, it should be remembered that there was no allowance made for unusual conditions of epidemic disease, wars, or cataclysms of any kind. I feel very strongly that there should be a wide margin of safety in providing for drugs as important in the practice of medicine for humanity at large as opium and coca leaf. What such allowance should be I have no idea and no means of determining, but I think the country should play very, very safe in determining such an allowance.

Now, I believe that the average of all seven communities, involving a total population of a little more than 2,200,000, was, with the applied hospital figure, 8.56 grains.

I think, in determining the country's needs as a whole, also, these seven communities should, of course, be combined with the studies made by the Public Health Service in Allegheny County and that figure included. It would, perhaps, not alter that figure a tenth of a grain.

I do not believe that I have anything further to say on the per capita aspect of this case, but I should like to discuss another subject under another topic. If there is anything I have said that is not clear, I shall be glad to answer any questions.

The SURGEON GENERAL. Did you go into the veterinarian and dental figures?

Doctor TERRY. Yes, sir; those are included in these figures.

One thing that we observed in the use of coca leaves by dentists is that there is practically no cocaine used by dentists. I do not believe that 5 per cent of the dentists we visited used cocaine in their practice. For the most part it was the poorer type of dentist that used it.

Doctor WHITE. Why were those particular places selected for study?

Doctor TERRY. As I said in the beginning, it was a guess on our part. We did not know, when we started, whether we had selected wisely. There is no means of knowing a typical American community as far as the use of coca leaf and opium is concerned. We chose Gary, Ind., on the suggestion of an official of the Bureau of Internal Revenue, because it was a large manufacturing center, and he thought that accidents and injuries in those large manufacturing establishments would increase the use of opium. It gave us the lowest figure of any community, 3.5. There is virtually no opium used in accident cases—at least not enough to affect the figure of per capita consumption a hundredth part of a grain.

In connection with the studies, the principal use of opium is, of course, in chronic diseases or chronic maladies. The use in acute cases accounts for very little.

Doctor WHITE. I would say that El Paso was among the larger communities.

Doctor TERRY. Not among the two largest. El Paso gave us a figure of 6 grains and a large fraction, which, in view of those two very large figures, is near the average.

Doctor WHITE. Near the average?

Doctor TERRY. Yes; but had not those two been so extremely high, El Paso would be above the average. For the most part there they use exempt amounts.

Doctor BOYLSTON. Is it not remarkable, Doctor Terry, that an extension of your figures checks almost exactly with the importations for 1926 and 1927?

Doctor TERRY. I do not remember just what that figure amounts to. It is about 150,000 pounds.

Doctor BOYLSTON. The importations for 1926, as given us this morning, were 141,000 pounds.

Doctor TERRY. We are still working on a report of Detroit, and all aspects of it have not yet been completed. The report will be completed by the end of this month. The per capita figure of which I have spoken, was completed and printed in a preliminary report issued last January.

The SURGEON GENERAL. Are there any further questions? If not, we will turn to section 3. We are trying to bring out the advisability or usefulness of certain suggested methods and the next one is the advisability of analyzing the prescription records on file in pharmacies with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels, of narcotic drugs as a basis for determining the normal medicinal and scientific requirements, and

what official and unofficial agencies may be expected to furnish these data.

I should like to hear some discussion of that from a practical pharmacist.

The Advisability of Analyzing the Prescription Records on File in Pharmacies With Reference to the Indispensable Uses, Ill-Advised Uses, and Diversions From Legitimate Channels, of Narcotic Drugs as a Basis for Determining the Normal Medicinal and Scientific Requirements

Mr. HILTON. Before discussing this subject briefly, I feel that I want to compliment Doctor McLEAN on what he brought out with reference to hospitals. I think that if anything is done with reference to going into the records of the pharmacists of this country, we should at the same time learn something from the hospitals all over the country. If you can not cover all of them, cover, if possible, typical hospitals in typical sections of the country.

I am quite sure that what Doctor McLEAN gave us this morning is instructive; but I feel certain, from personal knowledge, that there are some hospitals exceedingly careless in handling drug records. I think they ought to be kept up and measures taken to insure that drugs are kept under the control of one person and possibly reported on at regular intervals.

With reference to the retail pharmacists, there are some fifty to fifty-five thousand pharmacists in this country. It would be a very large job to check up all of them. I do not know but what there would be certain State organizations that might be willing to assist the commissioner in determining just what is being done by the retail pharmacists. Certainly they have all the prescriptions on file covering a period of two years. A retailer registered in class 3 must make his inventory and report it once a year.

Those retailers who are likewise registered in class 2, as wholesalers, of course make monthly returns. As stated this morning, we now make semiannual returns, as well, in which the department is given totals of the various narcotic drugs.

At the same time even if we did not have these semiannual returns, it would be easy to get that data from the monthly reports. The manufacturer or wholesaler, in furnishing a retailer who is registered in class 2, makes his report and we make our report, and it would be a very easy matter to set one against the other.

I recall that only a few months ago we sent an order to a firm in Chicago to furnish us with a certain commodity. That company, instead of furnishing a package containing a dozen articles, sent two packages containing six each. They should have returned the order form, but they did not do it. We had quite an explanation to make. It shows those returns we make are carefully gone over and analyzed.

I certainly would like to see something further done with reference to checking up prescriptions from the files—where they go, for whom, and for what purpose—so as to stop illegitimate use.

I know that, in my own business here in Washington, if I find a physician constantly sending in prescriptions for narcotic drugs for a certain patient, unless I find that patient suffering from an incurable disease, I report it to the authorities and let them investigate it.

Mr. FRAILEY. I think that we all recognize, as a result of Doctor Terry's report, the value of surveys.

Turning back, if I may be permitted, to the question having reference to the present system of analyzing manufacturers' records, I think the system probably offers the most practical method, for the present, but undoubtedly ought to be supplemented and checked through and a more or less perpetual survey made keeping in mind now and in the future the necessity of setting up and establishing and keeping a supply and reserve stock.

The SURGEON GENERAL. Is there any further discussion of this question?

Doctor MCLEAN. With reference to my own State—and I speak of it because I know more about it than any other—the druggists are required to make monthly reports which contain the information mentioned.

I should like, at this point, to propound a question which anyone here is at liberty to answer. A prescription is written by a physician who is considered of very high standing, for 1,600 tablets, one-fourth grain each, of morphine. What would any of you do with a prescription of that kind?

The explanation in this case was that the patient was a drug addict who was going on a long trip. He could not conduct his business without morphine and his physician wanted to give him enough morphine to last him.

At the time when this prescription came in, I happened to be in a position of responsibility for the enforcement of the drug law in Pennsylvania and I knew the druggist involved. He asked me what to do about it. I said I would not sell it. I said, "Do not tell me the name of the doctor." He replied, "May I tell the doctor that you advised me?" I said, "All right." I saw the druggist about a week afterwards and I asked him what the doctor said. He replied: "Oh, he said not to tell you." I said to him: "You sell him 1,600 one-quarter grain morphine tablets and let him furnish them to the patient." He said that he had offered to do that, but the doctor refused to do it.

As far as Pennsylvania is concerned, we check up, through the druggists, all narcotic prescriptions. How many States other than

Pennsylvania have a supervision like that—that is, where the druggists must report all narcotic prescriptions to some enforcement agency?

The SURGEON GENERAL. Is there any further discussion of this topic?

Doctor TERRY. I do not want to do too much talking, but a moment ago I referred to other aspects of studies that we made in certain communities, and especially in Detroit. I think that, in view of the topic under discussion, some of you are interested in this matter.

We determined, for instance, in Detroit, that there were about 510 addicts being legally supplied. Now, our unit for determining that may be different from what others might use. We determined it on the basis of a certain quantity of opium given over a certain period of time.

In addition to these 500 addicts, we found about 1,200 individuals whom we classed as border-line cases; in other words, they were being given opium over long periods of time, but not continuously throughout the year, in such quantities as, in our opinion, seriously to threaten them with addiction. We would find morphine being given for two or three weeks at a time in amounts totaling, maybe, two or three grains a day. A person receiving that amount of morphine over such a period of time, in my opinion, very soon will become an addict.

We found, also, that addiction occurred from the use of forms of opium not commonly supposed to cause addiction. I can not go into detail here, but we have been considering the use of these drugs.

We found, for instance, opium combined with remedies for dysmenorrhea requiring, several times during the year, enough to last an individual several days. In conditions of that kind the use of opium should be avoided.

We found prescriptions varying in quantity from 2½ up to 30, 40, 50, and 60 grains of morphine for the same individual. This is sufficient to cause addiction if not used with discretion. To put such amounts of morphine into the hands of any individual or member of the family I think most physicians would consider a dangerous procedure. We found hundreds and hundreds of such cases. They were not isolated cases, but they were limited to relatively few physicians. The same physician over and over again gave such prescriptions to different individuals.

We found morphine and codeine combined with coal-tar products in what I would call huge totals.

I think that the analysis of pharmacists' records and the physicians' dispensing records is a most important matter and

should certainly receive the attention of the Public Health Service in its studies of the use of these drugs. I believe that it would teach us more about the misuse of narcotic drugs by the medical profession than was ever suspected before.

Everything I have said in the way of judgment here is tentative; but there is no question in my mind that a very large amount of opium is used—not in addiction or in chronic painful conditions about which there is no question at all, but among such cases as we classify as border-line cases and in single prescriptions to individuals suffering from headaches or bad colds, etc., which is exceedingly dangerous and should be studied.

I believe that in making such studies we must be very elastic and very cautious in our judgment. I think that, at the present time, if an attempt were made seriously to interfere with the legal prescribing of opium for addicts, very great and unnecessary hardships would ensue. On the basis of the number of legally supplied addicts—presumably all old, incurable addicts—if such large numbers were interfered with there would not be enough institutions in the country to receive them for treatment.

Considering the opium used in the country as a whole, we should never lose sight of the fact that with five or six notable exceptions, American communities have made no provision for indigent addicts. An indigent addict to-day in New York can not get treatment unless he goes to police headquarters, is photographed, and is committed through the courts to a local jail, unless he consents to be committed to a State hospital for the insane. Such accommodations are not calculated to encourage application for treatment by addicts who can not afford to go to private sanitariums for treatment.

There are not many communities that differ in their method of handling cases of addition. The threatened cases of addiction or border-line cases, we can not say much about. We do not know how many addict cases of 1927 may have been numbered among the border-line cases of 1926. From the data at hand I believe that the physicians who are prescribing large quantities for what they consider legitimate addicts are proving a buffer between an ignorant public and a large group of sick individuals. While present practices do not perhaps involve a scientific method of treatment, physicians should not be, in our opinion, terrorized or hampered until we devise local or general provisions for treatment.

In considering, therefore, those figures which I gave before, and in considering the present study, I think that we must realize this, that the uses to which opium and cocaine are put to-day represent current medical custom. The whole problem of the medical use of these drugs is one of medical education and of bringing to the attention of the medical profession and the medical schools all over the

country the actual uses to which these drugs are put. In judging whether these uses are advised or ill-advised, we should act with very great leniency at the present time.

When you find cocaine hydrochloride combined with corpus luteum I do not think anyone would hesitate to say that this was an injudicious prescription.

The SURGEON GENERAL. Is there any further discussion of this subject? If not, I think we might very well take the fourth and fifth topics together.

First, the advisability of analyzing the records of dispensing physicians with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels, of narcotic drugs; and, second, the advisability of analyzing the records of pharmacists and dispensing physicians with reference to the indispensable uses, ill-advised uses, and diversions from legitimate channels, of the so-called exempt preparations containing narcotic drugs, and what official and unofficial agencies may be expected to furnish these data.

Doctor Woodward, you represent, I think, pretty well the practicing physicians throughout the country.

The Advisability of Analyzing the Records of Dispensing Physicians with Reference to the Indispensable Uses, Ill-Advised Uses, and Diversions from Legitimate Channels of Narcotic Drugs

and

The Advisability of Analyzing the Records of Pharmacists and Dispensing Physicians with Reference to the Indispensable Uses, Ill-Advised Uses, and Diversions from Legitimate Channels, of the So-Called Exempt Preparations Containing Narcotic Drugs

Doctor WOODWARD. There is no great difficulty in checking up these records. In checking up accurately, they must be checked up against the patient. The judgment of the physician is primarily the thing to be considered. It is for that reason that I suggested this morning a study, by enforcement districts, of the prescriptions of individual physicians, so as to determine the prevailing views of physicians and, if you will, the prevailing diseases.

What I think you have to do in getting a start in every district is, first, establish what might be termed a "norm," and then determine how large a variation from that norm you are going to allow before you consider the matter important enough to investigate.

Again, it is a study of the individual physician. I think you will find cases such as Doctor Terry has spoken of where the individual physician has prescribed excessive quantities. Some of the physicians prescribing the excessive quantities might be called upon to explain why they prescribe such large quantities at one time. Cer-

tainly in cases of quantities for addiction, persons suffering from chronic and incurable diseases, and chronic old-timers who can not be cured, the prescribing of certain quantities is not the proper method of practice. That can be determined from the prescriptions by others. I do not think that you will find any easy solution of this problem. We can sit here and talk and resolve from now until doomsday, but the solution of the problem lies in the field where you have to have an adequate corps of intelligent and honest inspectors, who are dependable and diplomatic, and who will approach the subject under competent direction. I know we have competent direction at the present time. These inspectors must bring evidence of errors in judgment to the attention of individual physicians, bring willful violations of the law to the attention of the courts, and bring to the attention of the proper medical boards the cases of physician addicts. Doctor McLean spoke of the fact that in some cases in Pennsylvania they had taken from physicians the right to prescribe narcotics, having found that the physicians were themselves addicts. I do not believe that such action accomplishes very much. Everyone knows that a physician is no more stupid than the average addict when it comes to resorting to underground channels of supplying his own needs if he is an addict. I think we will agree that while under some circumstances the physician may be a narcotic addict and at the same time be a safe physician, I do not believe we would want a physician like that. The remedy is not to cancel his license to prescribe narcotics. The remedy is to suspend his license to practice at all until he has reinstated himself. I think that we would make a mistake to say, " You can not prescribe narcotics lawfully," because he will get what he wants unlawfully. I do not believe that there can be too intense a study made of these records of prescriptions. How it can best be brought about I am not prepared to say. I think the logical approach is through the State medical association as far as medical men are concerned, and as far as hospital records are concerned. I do not believe that you will get very far unless you have their cooperation and support. From my rather intimate knowledge of the State medical associations, I feel confident that, if they are approached in the proper way and if the case is properly presented, they will give full support to any legitimate movement. I am equally sure that if any false step is made in approaching them, it will take a long time to win back their respect and confidence.

The SURGEON GENERAL. The whole question is divided into two parts: One part is, how can we find out or from what source we can find out these data which are essential? And the second is, through whom shall we find it out? As to the so-called exempt preparations, are there any suggestions along that line as to what shall be done and through whom and how it shall be done? I have

asked Assistant Surgeon General Williams to open the subject of the advisibility of using morbidity and mortality reports and statistics as a basis for estimating the sickness expectancy rate for various types of illness and utilizing such data for estimating the medical requirements respecting narcotic drugs.

The Advisability of Using Morbidity and Mortality Reports and Statistics as a Basis for Estimating the Sickness Expectancy Rate for Various Types of Illness and Utilizing Such Data for Estimating the Medical Requirements Respecting Narcotic Drugs

Doctor WILLIAMS. Gentlemen, I wish to apologize first for not having been able to be here this morning through pressure of other work which I was not able to leave. I did not have the opportunity to hear the discussion which has taken place on the other several questions, and so it is possible that I may repeat some of the things that have already been said. I therefore ask you to bear with me.

I will take only a short time to suggest a possible means of conducting studies that might be of value in throwing some light on this subject.

The Public Health Service has conducted rather thorough and intensive studies in at least one community in the United States which was selected as a typical American community in which the survey related to the amount of sickness. The studies took place over a period of about 28 months. They were conducted in a very systematic manner. The results of those studies have shown some very interesting figures. For example, that the rate of sickness from colds and bronchitis was the highest, being annually 416.6 per thousand persons. Influenza and la grippe was second with a rate of 143.2 per thousand. Diseases of the digestive system was 96.5; tonsillitis and sore throat, 65.7, and so on down through a rather extended list.

In the State of New York the State health department a year or two ago undertook a similar study. Just briefly I will state their method. They selected 100 general practitioners in a given area and secured their cooperation. Those men simply reported the number of those cases each week. A good many of the diseases included are not ordinarily reportable, for instance, heart disease or Bright's disease. The ordinary diseases required by law to be reported refer to the so-called communicable diseases, and that is why these intensive or special studies were necessary.

In this particular study in New York State it was shown that 28 per cent of the total amount of sickness attended by these (approximately) 100 physicians were colds. The next highest group, 14 per cent, were digestive disorders; 13 per cent were surgical cases; 7.7 per cent neurosis; 6.9 per cent children's diseases; 6.7 tonsillitis; and so on.

I simply offer those two examples with this point in mind, that it will be entirely practicable and feasible and, I think desirable, in connection with this problem, for the Public Health Service to undertake in selected areas throughout the United States, four or five areas, perhaps, that are widely separated, studies of this type, to determine the amount of sickness and the character of the sickness. The details of such sickness, of course, could be worked out later very carefully, but I believe that such a study might be of considerable assistance to us in determining the character and amount of illness, particularly with reference to the different sections of the country. The studies I spoke of were made at Hagerstown, Md., and in New York State. The rates obtained in those sections might not be applicable for the Middle West or the Pacific coast, but I do think that some such studies as I have indicated might be of assistance to us.

The SURGEON GENERAL. Is there any discussion of this subject?

Doctor BOYLSTON. I would like to ask whether the Public Health Service did not actually predict the spread of the not very virulent but rather general influenza that we had during the latter part of 1928 and the first part of 1929? Was that not actually predicted as early as November or October of 1928?

The SURGEON GENERAL. Yes; and we were jumped on about it a great deal at the time. They said there was nothing in it.

Doctor BOYLSTON. If it had been taken more seriously, a great deal of difficulty would have been avoided. Is that not true? The manufacturers will remember what shape we were in at that time.

The SURGEON GENERAL. Is there any further discussion?

The next question we have on the agenda and the last one before we come to some conclusions is: "The advisability of undertaking an educational program on the indispensable uses of narcotic drugs, and what official and unofficial agencies may be expected to contribute to such a program."

Dr. William Charles White, chairman of the drug committee, National Research Council, may be able to throw some light on this question.

The Advisability of Undertaking an Educational Program on the Indispensable Uses of Narcotic Drugs and What Official and Unofficial Agencies May Be Expected to Contribute to Such a Program

Doctor WHITE. Gentlemen, I suppose we really ought to describe drug addiction as a disease, characterized by a man's dissatisfaction with his environment; but it is certainly one of the incurable diseases.

We are not unfamiliar with large educational campaigns, carried out in a large way, with the idea of overcoming diseases for which we have no cure. You are all familiar with the tuberculosis educa-

tional campaign, the cancer campaign, the alcohol campaign, the syphilis campaign. When we have no cure we really have not accomplished much by these campaigns, except to provide a very large increase in our voluntary and compulsory taxation for the supervision of new hospitals, new clinics, and new dispensaries, and for increasing the nursing corps for the care of those who are actually sick.

The same thing has happened in this drug-addiction problem. We have carried on campaigns of education, and we have provided farms and places in prisons and in a large number of institutions for the care of drug addicts; but, having no cure for it, we have a conference like this, searching among the brains of those who are competent to judge, for something which will help us out.

I suppose that the most intensive campaign ever carried on was the one when the three philosophers came to Job to try to convince him that he should forget his environment of boils; but they did not accomplish very much, because Job simply said, "Well, can you unloose the bonds?" Men can not forget their environments. Pain, of course, is an environment that men can not overcome. They may be led to drug addiction through such a state of affairs. Men may be sent so often to prison that they think life is not worth living, and so they engage in something to reduce the sensitiveness of themselves to their lives and environments.

I think that we should ask ourselves, in any attempt to carry out an educational campaign, what we are going to educate about. The research council, having been charged by the Bureau of Social Hygiene with trying to find some solution for this problem was faced with the question of education. After casting back and forth among themselves for opinions and inviting outside opinions, they came to the conclusion that the proper unit of education was the physician and his clientele, and that any education, to be effective, must be carried on through these channels. Any attempt to educate the physician must not be in the hands of lay educators, because those people often say things that are not true, and the physician, when the public hears them, would say, "Why, it is not true," and so their confidence is lost. The lay press has found a great deal of fault with scientific bodies for not being frank with their public. The research council was faced with the necessity of putting up something that was authoritative, through the proper channels. Since statements to the physicians should be authoritative they should have the sanction of their organized body, the American Medical Association, and its council of pharmacy. It was thought that a group of specialists in each field in which these addiction drugs are used, such as morphine, for instance, in obstetrics, in tuberculosis, and diseases of the lungs, and in various other fields,

should back up the statement. Then after the research council, the Public Health Service, the American Medical Association and its council of pharmacy, and a group of physicians had passed upon the article, probably the practicing physician would take it as an authoritative article. That has all been brought about and the editor of the Journal of the American Medical Association has accepted the task of revising and putting in shape these articles written by individuals, passed upon by these various boards, and will eventually bring them out with editorial comment, in book form, to be utilized by physicians for their own information and for distribution to their patients.

It seems to us, after two years of study, that that probably will be the practical method of reaching the public finally in a way that will be authoritative and beneficial.

I think that the thing we talked about this morning and this afternoon is perfectly true—that we just have not got enough knowledge. One of the most productive things about this new law is that it offers the privilege of research. Through the Bureau of Social Hygiene, the National Research Council, through a committee composed of Dr. Reid Hunt, Doctor Hobson, Doctor Solomon, and others, has been working out a program which I am sure, after hearing the report of Doctor Terry for replacement drugs, will take the place of everything that we now use addiction drugs for. If we can replace every legitimate use of every one of these conditions for which it is used, we will probably accomplish what Doctor Terry said was done with cocaine, which no dentist now uses. It was a very frequent source of diversion. If we can eventually replace every legitimate use of these addiction drugs, we probably have an easy way of reducing the amount of requests that are placed upon the police authorities to stamp out this thing that we think is a great burden.

We are likely to be sidetracked on the diversion of the small 5 per cent. It is really of no importance compared with the main task, and I would consider the main task finding out a little more about the possibility of replacing these drugs we are now using.

I had almost forgotten what I think is perhaps the most important thing for the research council committee, and that is the most cordial cooperation on the part of Mr. Anslinger's department and of the Public Health Service. We have never requested a single thing from them that they have not granted us. That is the spirit of this movement, and I hope it will work out.

The SURGEON GENERAL. Is there any discussion?

Doctor FINLEY. I would like to say that I think the American Dental Association has been given over to the question of education. In line with the council of pharmacy in the American Medical Asso-

ciation, we have such a council in the American Dental Association and our national journal is publishing their reports, which is a matter of education.

Since 1910 the American Dental Association has been connected with the United States Pharmaceutical Convention. We have worked with officials there to try to control the formulas for cures which were superior. May I say that the enforcement bureau of the Department of Agriculture has repeatedly stated that the trouble with enforcing any of these laws was that men of reputation were on both sides of the question, and it was a very difficult matter to get local action. I believe that the American Dental Association and boards of examiners of each State will go as far as any medical group in removing the privilege of practicing if attention is brought to those organizations that there are violations of the law which amount almost to a felony. The association membership of each State society and the examining boards of each State are very careful to see that the practitioners obey the law. This is the question that is before us—to eliminate those who violate the privilege granted to them by their license to practice. I think that we will go as far as, or perhaps a little farther than, the medical profession has gone in taking away entirely the privilege of practicing, where this question of violation of the law has come up.

The SURGEON GENERAL. Is there any further discussion?

Mr. FISCHELIS. Gentlemen, Doctor White mentioned the matter of replacement of narcotic drugs with preparations that are not habit-forming. In that connection it might be well to bring out, as has already been stated, that some of the addictions are caused by the use of the so-called exempt preparations, such as paregoric and drugs of that kind. Of course the retail pharmacist can limit and does limit voluntary sales of such products to consumers; but if the avenue of the grocery store and similar unlicensed dealers is left open the customer who can not procure his exempt preparations at the pharmacy will go to those sources for his product. There is a very practical method of limiting sales of that type. It was done in our State of New Jersey, where three years ago there were something like 800 dealers who held class 5 narcotic permits, and sold these drugs. We notified the department in Washington that under the State law it was unlawful for anyone who was not a registered pharmacist or working under the supervision of a registered pharmacist, to sell drugs or medicines, and that these exempt narcotic preparations were certainly drugs and medicines. As the result of that notice and opinion from the State attorney general, forwarded to the Internal Revenue Department, the department sent word to its collectors at Camden and Newark that whenever a grocery dealer or general merchant applied for a class 5 permit he was to be writ-

ten to the effect that it was unlawful in the State of New Jersey for him to sell those items. The claim was made that nothing could be done about having him pay the Government tax, if he wanted to pay it, but at least he received this warning, and that was sufficient to cut down the number of such class 5 dealers from 800 three years ago to about 100 at present.

That is a very practical method of cooperation between the State boards of pharmacy and the Federal Narcotic Bureau, and it would certainly help an educational campaign, because if the campaign is along the line of finding substitutes for these narcotics, or replacement preparations, certainly it should be supported by those who deal in the items that are to be replaced.

Another fact which impressed me in Doctor White's discussion, was the name that he gave these preparations, namely, "addiction drugs." I notice that he is chairman of the drug committee of the National Research Council. The term "drug" has been applied to narcotics to such an extent that the public does not distinguish between narcotic drugs and addiction drugs, and drugs in the ordinary sense. It seems that everybody who is engaged in any educational problem along this line ought to use that qualified term—either "addiction drug" or "narcotic drug," or even the term "dope" is preferable to the word "drug," because the average citizen is likely to confuse something that is valuable with something that might be harmful.

Doctor EBERLE. The American Pharmaceutical Association meets annually, and I think there are two bodies that recently have been organized, the Pharmaceutical Association of Secretaries and the law enforcement officials having to do with pharmaceutical lines. Both of those bodies doubtless would be of great help in the study of this matter. I refer to that as one of the means for educational purposes.

Doctor WOODWARD. The topic for discussion is "The advisability of undertaking an educational program." That is not limited, I observe, to the medical profession or the dental profession or the pharmaceutical profession or to any other group. If that means an educational program with reference to the public, we are at once faced with the basic cause of the entire situation. The educational program that should be undertaken, if it is to be a public educational program, must begin in the nursery and run up through the kindergarten, through the grade schools, through the high schools, and through college. I am inclined to think that any effort to teach, certainly below the college, the dangers of narcotic drugs, would be rather to invite danger than to ward it off. The education that we need is the old-fashioned education that taught a young man and a young woman that it was a matter of pride

to endure pain and suffering; not that one must promptly seek some way out of it. I think that has a great deal to do with the prevalence of the narcotic addiction at the present time. Young men and women, boys and girls, are unwilling to endure pain, and the doctor is put to it to get the best psychic effects on his patient. He goes astray because he has not the cooperation of the patient. It is that demand from the public for a drug that will enable those persons who may be termed psychically unsatisfactory, to adjust themselves to their environments which creates the demand for the diversion of the narcotic drug from legitimate channels. Unless we can instill into the communities that we serve a different idea with respect to pain and suffering, that it is nature's way of warning us, that it is a matter of pride and endurance, we are not going to get away from the demand for narcotic drugs. If we do not get away from the demand for narcotic drugs, it will be met either by diversion from legitimate channels, which I think constitutes a very small part of the entire illegitimate use of narcotic drugs, or it will be sent to underground channels. For every one who acquires the habit through legitimate channels, there are hundreds of others who acquire the habit through underground channels.

Dr. Reid Hunt. I should like to emphasize what Doctor White has said about replacements in this field, and a very little thought will show what progress has been made, almost within the memory of some of us who are here to-day. Before the discovery of chloral hydrate, the only drug to put people to sleep was opium. Before antipyrin and that group of drugs came in, there was nothing except opiates for neuralgia. Before epinephrin and ephedrin there was practically nothing for asthma. There has been wonderful progress made in the last 20 years in these replacement methods. There is every reason to suppose that it will be extended almost indefinitely, until possibly the time will come when we can dispense with sleep-forming drugs altogether.

Capt. W. H. Bell. Gentlemen, I was going to emphasize, if necessary to do so, the note which Doctor Woodward struck, namely, that progress has unquestionably been made in the way of replacements. Those replacements have been in a limited direction. The medical profession has failed to resort to those more or less time-consuming psychological replacements which are absolutely necessary if for no other reason than to get back to the sterner period of our history, when young people and older children were taught "self." The process of jumping to these pain-relieving sources of a medical character to relieve people of distress has followed suffering to a certain extent. The self-made man of to-day abhors the prospect of his children going through the same character of building process which

he had to go through in order to arrive where he arrived later in life. We have neglected that altogether too long.

In the Navy, if I may refer to the Navy, which is a small part of the country, we try to be human, and are growing more so as time goes on, in the handling of these cases which come to our attention. I think we are not given to overcoddling those that come under our care.

If I may go back for a moment to the previous question, our present reports on morbidity and mortality do not give the information which, of course, is desired in determining the amount of narcotics required. It would be absolutely necessary to have before us the case records for that, or the official reports over a given length of time, which would show the amount of a given drug required for a given type of case. The average annual amount issued, not necessarily used, for there was some remaining in stock, but the average annual amount issued in the Navy for the five fiscal year periods 1926 to 1930 was 29,293 drams. I am giving this for the purpose of putting it on the record. Taking the average complement of the Navy and Marine Corps for the year 1929 as a basis, which was 117,388, it shows that 0.249 dram per man was issued for the year, or 0.000682 dram per man per day. If the number of sick days were taken as a basis, instead of the complement, the figures would show, with 1,328,353 sick days for all causes, and 29,293 drams annually for the 5-year period, 0.022 dram per sick day for all cases. These do not give accurate figures for basic estimates, although they might be used as a rough estimate of the requirements.

Mr. TENNYSON. Mr. Chairman, I think that something along this line of education would be, perhaps, to provide some method of education among State authorities for the purpose of enacting adequate State laws, to deal not only with local administration, dispensation, and sale of narcotics, but also to deal with the point that this gentleman from the American Dental Association brought up about the handling of the licenses of those physicians who unlawfully sell and dispense.

We have had some sad experiences along this line. For instance, we had the case of Doctor Manning in St. Louis, who was convicted twice, if I remember correctly. The second time he was released from the penitentiary on a legal technicality, and thereupon he immediately registered and began his former course of action. He issued more than 10,000 prescriptions within a space of six months. Some of them called for as much as 30 grains of morphine. When Doctor Manning was arrested again, the agents occupied his office for him for the remainder of the day and there were about 25 addicts who came to him for their regular supply on that day. They were used as witnesses.

At that time we took up the question of the revocation of his license with the State board, and we were told they would await the outcome of the Federal prosecution. We urged the State attorney general that it was not necessary for them to await the outcome of the Federal prosecution. They had the records available and the narcotic inspectors were there for their convenience. We finally succeeded in having Doctor Manning's license revoked and he was later convicted. He is now in the penitentiary. The conviction was affirmed by the circuit court of appeals. That is one case.

We have another case, a Doctor Storm, in Georgia, who has been convicted on three or four occasions for flagrant violations of the narcotic law. The agent took up with the State medical board the matter of revoking his license, and in October of last year it was revoked. Later on the doctor, not having been notified of the revocation of his license, was still practicing medicine; that is, so-called medicine. The narcotic inspector called his attention to the fact that his license had been revoked. Thereupon he got busy. He was notified by the State board that his license was revoked, and later on the agents were astounded to receive a letter from the secretary of the State board telling them that Doctor Storm's license had been restored just in time to be registered for the present fiscal year; and he is now registered and free to go ahead and do what he has been doing all along. With the approval of Mr. Anslinger, I intend to ask the State board just why this man's license was not revoked, because the secretary asked us to furnish him the names of any other physicians which we thought should have their licenses revoked by the State board. Later Doctor Storm wrote a letter to the agent in charge, calling his attention to the fact that his license had been restored, and said he would like to see him. I do not know why he wants to see him, except to enjoy a hearty laugh, to which I think he is entitled.

Things like that discourage us in securing State cooperation. I think a campaign of education urging not only adequate State laws, but urging proper and serious enforcement of them, would go a long way toward solving the problem.

Doctor WOODWARD. I can not let that statement pass unanswered. Until recently the Commissioner of Prohibition has had charge of the enforcement of the Federal narcotic law and has absolutely refused to give the State officers evidence to show that physicians were narcotic addicts. I know that because it has been stated indirectly that there was no authority for the furnishing of such information. The only way by which a State can be furnished such information is by an order on the Secretary of the Treasury. That order had no specific relation to narcotic records, and I am sure the Secretary of the Treasury, on proper representations, would have modified that rule relative to narcotic addicts in the medical profession.

As to the Doctor Storm case, I do no not know. I should like very much to hear from the Georgia board before I accepted the statement that has been made here to-day. I would want to know why his license was restored. However, the situation has been cleared up through a provision that was inserted in the recent Porter narcotic bill, on the urgent representation of the American Medical Association, requiring the Secretary of the Treasury to cooperate with State boards. The Secretary of the Treasury has no option at the present time. He is bound by law to cooperate with State boards and State officers in the enforcement of narcotic laws.

As a matter of fact, not only is the Secretary required to cooperate, but it is made mandatory on him to cooperate with the State officials in framing and procuring the enactment of State laws, so that there shall be in this country a closely interlocked series of Federal and State laws to meet the narcotic situation.

The SURGEON GENERAL. We are very much interested in the question of substitution; that is, getting some synthetic, nonhabit-forming substitutes. That is a question, however, that we are going to leave to the manufacturers and those research people who are sitting here—Dr. Reid Hunt and others. We are also interested in the educational feature; but the particular thing for which we asked you to come here is to help the Public Health Service in ascertaining the legitimate needs of the country. I think we have gotten a great deal of information and material here now, and I would like to have some one formulate it in the shape of a resolution or suggestion, as to just how we shall go about the work. If you will do that, it will be easier than for us to have to form our own conclusion, possibly.

Doctor CAMALIER. Before closing this discussion, may I say a word, reverting to an earlier subject? I do not believe that the point has been brought out that it might be practicable for the Bureau of Narcotics to circularize registrants. Of course, you can get most of your information, as has been brought out, by a system of analyzing the sales of manufacturers and wholesalers; but would it not be a good check to circularize in some way, through the Narcotic Bureau, the registrants themselves? I concede that it would be difficult for the physician to estimate the amount of narcotics which he would need for a year; but that would be comparatively easy for the dentist. However, the physician might be able to do that; and if you can check one against the other, you might arrive at a better conclusion than otherwise.

I offer that merely as a suggestion.

Doctor MCLEAN. Following the request of the Surgeon General a few moments ago regarding the advisability of analyzing the rec-

ords of general and special hospitals of institutions, I would suggest that the American Hospital Association be requested to establish proper methods of control of narcotic drugs in all hospitals in their association.

The SURGEON GENERAL. To make a specific record, is there any second to that suggestion?

Doctor EBERLE. I second it.

The SURGEON GENERAL. If that is the sense of the meeting, I would like to have all in favor say "Aye."

The motion was carried.

The SURGEON GENERAL. With regard to the advisability of analyzing the prescription records on file in pharmacies, is there any suggestion by anybody?

Doctor TERRY. My understanding is that you are asking for a specific suggestion as to the desirability of analyzing those records?

The SURGEON GENERAL. Yes.

Doctor TERRY. With the thought in view of determining the legitimate medical needs?

The SURGEON GENERAL. Yes.

Doctor TERRY. I do not see how the legitimate medical needs can properly be determined in any other way. We have, I think, from studies made by the Committee on Drug Addictions of New York, a very fair idea of what the current medical uses are. That has no connection, or very slight connection, however, with the question of whether or not these uses are advised or ill-advised. We know, for instance, that as opium is used to-day in medicine legally, which is very different from legitimately, eight grains are needed per capita per year; but only by studying the records of distributors who precede the patients who swallow the drugs, can we determine the advisability of the uses to which those drugs are put at the present time. The narcotic prescriptions in any drug store in the country I am convinced will show, with very little search, 5, 10, 15 per cent of the physicians who are using the largest amount of narcotics. The practical way of analyzing those records would not be as burdensome as the way we employed, because in our studies we were trying also to determine the per capita amounts used. The practical way would be to scan those prescriptions in selected communities. I think this scanning should be done by officials of the Public Health Service, in accordance with the provisions of the law as I understand it, and that certainly is the most suitable body to make such an investigation.

Scanning such records would very quickly point out the relatively small percentage of physicians who are using large amounts. Those prescriptions will furnish you with the amount of drugs used, the combinations, the name and address of the patient, and the name of the physician. It would be a very simple matter, when you have

accumulated a few hundred such prescriptions, to take the case of one man and have a check made of him to find out what diseases he is prescribing for in those certain cases, and upon what rational basis of therapeutics he determined upon such amounts.

I do not see how you can arrive at a basis for better medical education unless we know what is being done to-day—how those drugs are being misused. I do not see how we can get medical men and professors of therapeutics in colleges to turn out men who will not prescribe 10 or 15 grains of morphine for a case of headache or prescribe cocaine internally for conditions in which it is not advisable to use it, unless we know just what is being done. The medical school is available to us as a basis for medical education which, in my opinion, is the most important of all educational movements for the solution of the therapeutic cause of addiction. I do not see how you can proceed in any other way.

I would offer a motion that the Public Health Service should study the records not only of pharmacists but the records of dispensing physicians, as they are just as important as the pharmacists. A very large percentage of physicians dispense all their own drugs. I move that studies be made to the end that they may determine the present advised and ill-advised use of opium and cocaine and their preparations, with the view to using it as a basis for better medical education in the use of those drugs.

Doctor KELLY. I should like to repeat the tender of cooperation that I made this morning in the name of our association in any study of records of pharmacists that the Public Health Service wishes to undertake. Our association as far back as its establishment in 1852 went on record as establishing the most drastic control of dangerous drugs, and we have tried to follow that declaration as closely as possible since that time. We are in a rather different position in this matter. We are charged by law with the dispensing of certain drugs. We do not have any latitude in discussing the wisdom of their use. We do try, however, in every possible way to impress upon those who enter into our work that they are paid a very high compliment by our Government in being charged, to some extent, with the distribution of these important and dangerous drugs, and we try to impress upon them their responsibility in carrying forward their duty correctly.

As I stated this morning, we believe that the records which are available are probably sufficient for the purpose if they are adequately stated. We further believe that the agency to which the Government is turning over this case, the Public Health Service, is the proper agency. Consequently we wish to tender again our offer of support, and in that sense I wish to second the motion as made.

The SURGEON GENERAL. Is that the sense of the body?

Doctor WOODWARD. I would like to state that I am a member of the committee appointed by the American Medical Association to come here and advise with the officers of the Government regarding this matter. I certainly have no authority to cast any vote either one way or the other on any resolution without the cooperation of my associates on the committee, two or three of whom are not here. Personally, I do not believe the committee would be authorized to vote on any resolution that might be regarded as representing the views of the American Medical Association. Our constitution and by-laws provide that policies of the association can be made only by the house of delegates or, in the absence of the house of delegates, by the board of trustees. So I desire to be recorded as not voting on any resolution.

The SURGEON GENERAL. I think we can count on your cooperation.

Doctor WOODWARD. You can count on our cooperation. While I am on my feet I should like to say I think that you will get the cooperation of all these groups if a similar group representing the several associations, not more than one representative for each of the organizations, can sit down after they have something tangible from this conference and study the matter, and then it can be adopted here.

The SURGEON GENERAL. That is what we hope to do after discussing the thing in full.

Doctor WHITE. I would like to offer a resolution which I hope will not interfere with Doctor Woodward, and that is that it is the sense of this conference that the United States Congress should provide funds for these governmental bureaus to carry out this work. They have asked all of us here to confer with them. They have on record all that we think about it. They are charged with this duty, and I think we should pass a unanimous resolution urging Congress to give them the money to do it. I would offer that as a resolution.

Mr. FRAILEY. On behalf of the manufacturers, keeping in mind the necessity of setting up and maintaining an adequate reserve stock, I want to second Doctor White's motion.

The SURGEON GENERAL. I am quite sure that when the question is put up to the responsible officers of the Government, the Budget officers, they will give us a sufficient amount to carry on. Personally, I would not like to put a motion of that kind.

Doctor SWAIN. May I ask a question regarding the motion made by Doctor McLean, of Philadelphia?

Doctor MCLEAN. Yes.

Doctor SWAIN. The motion has been passed, but I would like to ask a question regarding it.

The SURGEON GENERAL. Certainly.

Doctor SWAIN. Doctor McLean made a motion which I think is a wise one, that hospitals should undertake some adequate method of controlling narcotic drugs. Will you repeat for my general information, or can you tell me from your experience as a public official as well as a hospital official, what, in your judgment, would be adequate control?

Doctor MCLEAN. Yes; I can. I would use as a basis for such regulations something similar to that which we have in the Philadelphia General Hospital. That may not be applicable to all hospitals, but it is at least a basis on which something can be established. Do not forget that I said, "Put in operation actual information that must be placed on the narcotic forms furnished by the narcotic division." I believe that sometimes is rather indifferently recorded. The idea is to have them better supervised in the hospital itself. Does that answer your question?

Doctor SWAIN. As they formulate the plan in detail here applicable to all hospitals, it would be impossible.

Doctor WHITE. Mr. Chairman, will you let me ask a vote on my motion?

The SURGEON GENERAL. I have no objection, Doctor White.

Doctor WHITE. All those in favor say "aye"; those opposed, "no."

(Doctor White's motion was unanimously agreed to.)

The SURGEON GENERAL. Gentlemen, perhaps to some of you this discussion has not been so definite, and we have not arrived at any definite conclusions; but so far as I am concerned—I do not know whether I speak for Mr. Anslinger or not—this meeting has been most valuable in bringing us information, and I want later, with your permission, to get a smaller group to discuss ways and means of carrying out what seems to have been the sense of this body as to what means we should adopt to carry on this very important work. It is a work that we want to carry on, and that we can hardly expect to carry on without your cooperation. Certainly it will make it very much easier, and we shall achieve much better results if we have the hearty cooperation of all concerned.

I want to thank you again, not only on my behalf, but on behalf of those associated with me, for being good enough to come here at this time of the year.

(The conference adjourned at 4.05 o'clock p. m.)

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